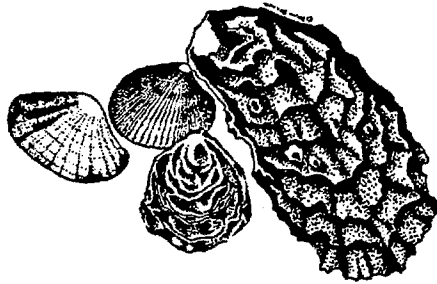


Shellfish Protection Through Land Use Management

DRAFT



June 1992
92-44



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SHELLFISH PROTECTION THROUGH LAND USE MANAGEMENT

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SHELLFISH PROTECTION
THROUGH LAND USE MANAGEMENT
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- Appendix 1- Pierce County On-Site Sewage Disposal Extracts.
- Appendix 2- Thurston County (TC) Article IV Extracts.
- Appendix 3- TC Civil Infraction Process.
- Appendix 4- **DRAFT** TC Nonpoint Source Ordinance.
- Appendix 5- TC Zoning Ordinance - Extracts.
- Appendix 6- Rural Environment Ordinance.
- Appendix 7- Pierce County Environmental Regulations.
- Appendix 8- **DRAFT** TC Proposals for Rural Zoning.
- Appendix 9- Ecology's Wetland Model Ordinance.
- Appendix 10-Island County Zoning Ordinance (Extracts)
- Appendix 11-Agricultural Best Management Practices.

PURPOSE

The Growth Management Act and 365-190 WAC identify shellfish tidelands and bedlands as critical areas. This document is designed to help local governments more precisely define shellfish resources and establish policies and programs capable of protecting them.

Effective tools which can achieve regional goals and objectives related to shellfish and nonpoint source pollution are presented in this document for possible inclusion into local ordinances.

The Department of Ecology recognizes that local authorities are the experts on land-use planning. We can offer technical assistance to counties and cities on impacts to shellfish and standards and practices needed to eliminate the impacts. Please contact the Shoreland's Shellfish Protection Unit in Olympia at (206)459-6778 or scan 585-6778 if you have any questions.

SECTION I

Growth Management

General

The Growth Management Act (GMA), or Substitute House Bill (ESHB) 2929, was passed in 1990 to address growth-related problems and preserve the quality of life in Washington. It mandates coordinated and comprehensive planning at the local government level. Some amendments were made in 1991 (Re-ESHB 1025).

The GMA requires cities and counties in designated rapid-growth areas to plan in accordance with statewide goals. Other jurisdictions, not required to participate, were given the opportunity to elect to do so. Once a jurisdiction opts in, the GMA requires full compliance.

One of the emphases of the GMA is the protection and conservation of resource lands and critical areas. Planning must be coordinated with surrounding jurisdictions, to provide consistency in land and transportation plans. Local governments develop their own long range growth plans, ensuring that local needs will be met.

The Growth Management Act requires the following from counties and cities in the State of Washington:

- 1 Interim classification and designation of natural resource lands and critical areas must be done by September 1, 1991 (extended to March 1, 1992).

Natural resource lands are agricultural, forest and mineral resource lands which have long-term commercial significance.

"Critical Areas" include the following areas and ecosystems: (a) Wetlands; (b) areas with a critical recharging effect on aquifers used for potable water; (c) fish and wildlife habitat conservation areas; (d) frequently flooded areas; and (e) geologically hazardous areas [ESHB 2929].

- 2 Cities and counties with comprehensive plans must make their development regulations (zoning, subdivision, and other controls) consistent with their comprehensive plans.
- 3 As of July 1, 1990, approval of short plats and subdivisions will be given only if it has been determined adequate services exist and provisions have been made to protect public safety.
- 4 As of July 1, 1990, all building permit applicants must prove that adequate potable water exists for the intended use(s).

The following requirements apply to all rapidly developing counties and cities or those that chose to meet GMA requirements.

- 1 Interim plans for designation and protection of natural resource lands and critical areas must be in place by September 1, 1991 (extended to March 1, 1992).
- 2 Urban growth areas must be designated by July 1, 1991. No annexation can take place outside the urban growth boundaries once established.
- 3 Comprehensive plans must include the following elements:
 - ▶ Land Use
 - ▶ Capitol Facilities
 - ▶ Transportation
 - ▶ Rural Land Use (Counties only)
 - ▶ Housing
 - ▶ Utilities
- 4 Comprehensive plans containing the required elements must be completed by July 1993. Final designations for critical and urban growth areas must be included.
- 5 One year following the submission of the final comprehensive plan (1994), local development regulations (zoning, subdivision, and other controls) must be consistent with the comprehensive plan.
- 6 Planning between neighboring jurisdictions must be coordinated.
- 7 Neighboring counties and cities must jointly identify lands that may be useful for public purposes (i.e. schools, landfills, sewage treatment plants).

In addition, Section 9 of the Growth Management Act states that comprehensive plans should provide for the use of innovative techniques. These may include, but are not limited to, density bonuses, cluster housing, planned unit developments, and transfer of development rights. Each of these techniques will be briefly discussed in Section III of this document.

Shellfish Protection Under Growth Management

The GMA is fairly clear on the purpose for designating areas of critical importance, but does not give detailed information to local planners on what should be considered while designating critical shellfish areas. Chapter WAC 365-190-80 does give very specific items to consider and reads as follows:

All public and private tidelands or bedlands suitable for shellfish harvest shall be classified as critical areas. Counties and cities should consider both commercial and recreational shellfish areas. Counties and cities should at least consider the Washington Department of Health classification of commercial and recreational shellfish growing areas to determine the existing conditions of these areas. Further consideration should be given to the vulnerability of these areas to contamination. Shellfish protection districts established pursuant to chapter 90.72 RCW shall be included in the classification of critical shellfish areas.

"Suitable for shellfish harvest" has been interpreted by Department of Ecology to mean all commercial beaches or areas with a Department of Health (DOH) classification of *"Approved"* or *"Conditionally Approved"* (Table 1). All areas designated as shellfish *"Restoration Areas"* (where the source of contamination is known and has potential of being eliminated) should also be included on the local critical list. It is further recommended that local plans provide a mechanism to provide for areas that are re-classified (upgraded to *"Approved"* or *"Conditionally Approved"*) or are added to DOH's classification lists. Table 2 contains a listing of commercial areas which should be considered critical.

Recreational areas are currently not classified by the DOH. Ecology recommends that all public beaches with suitable intertidal substrate, demonstrated public use, and the presence of shellfish, either currently or historically, be considered "suitable for shellfish harvest" and designated as critical. Established upland use which might degrade water quality and proximity to significant outfalls must also be considered. Table 3 lists recreational beaches which the Ecology's Shellfish Protection Unit have determined to be "suitable for shellfish harvest." This table should not be considered as all-inclusive, local knowledge could easily result in additions.

Local jurisdictions will have particular situations which may reflect on the suitability of a beach for harvest. In designing local criteria regarding critical shellfish areas consideration of the following items, again not all-inclusive, will be helpful.

- ▶ ***Department of Health classifications.***
As recommended by Chapter WAC 365-190-80.
- ▶ ***Recreational and Commercial "Suitable for Shellfish Harvest" list*** Tables 2 and 3.
- ▶ ***Upland soil conditions, average depth of seasonal ground water table, vegetation, etc.***
This information allows local planners to anticipate potential problems with existing or future on-site septic systems.
- ▶ ***Stability of adjacent bluffs.***
- ▶ ***Number of existing commercial or non-commercial animal-keeping facilities in the area.***
Local planners may want to recommend or mandate that local farms use Best Management Practices (BMPs).
- ▶ ***The possibility of establishing or enhancing of shellfish populations in the future.***

Development Regulation in Critical Areas

As stated in Section 6 of the GMA, counties and/or cities "shall adopt development regulations... precluding land uses or development that is incompatible with critical areas." A typical means for local jurisdictions to comply is by adopting ordinances. Examples of appropriate ordinances already in existence or in draft are included in the appendices of this manual.

Pierce County - On-Site Sewage Disposal Rules and Regulations - Appendix B - June 1987 (Appendix 1).

**Thurston County - Article IV - Disposal of Sewage
Sections 15 and 30 (Appendix 2).**

**Thurston County Administrative and Civil Infraction Process
(Appendix 3).**

DRAFT Thurston County Nonpoint Source Ordinance (Appendix 4).

**Thurston County Zoning Ordinance - Extracts
(Appendix 5).**

**Pierce County - Rural Environment Ordinance
(Appendix 6).**

**Pierce County - Chapter 17.08 - Environmental Regulations
(Appendix 7).**

DRAFT Thurston County Proposals for Rural Zoning (Appendix 8).

**Island County - Chapter 17.02 - Zoning Ordinance - Extracts
(Appendix 9).**

TABLE 1 Commercial Growing Classifications

The DOH Shellfish office classifies all actual and potential commercial shellfish growing areas in Washington state as Approved, Conditionally Approved, Restricted, or Prohibited. The classifications have specific standards associated with them which are defined below.

APPROVED A growing area may be classified as Approved when the sanitary survey and the bacteriological water quality data indicate that fecal material, pathogenic microorganisms, marine biotoxins, and poisonous or deleterious substances are not present in dangerous concentrations. The bacteriological quality of the marine water samples collected from an Approved growing area must satisfy both parts of the following standard: 1) The concentration of indicator(fecal coliform bacteria) shall not exceed a geometric mean most probable number (MPN) of 14 per 100 milliliters (ml); and 2) not more than 10 percent of the samples shall exceed a MPN of 43 per 100 ml, using the A-1 modified 5-tube/3-dilution method.

CONDITIONALLY APPROVED An Approved growing area subject to intermittent, but predictable microbiological contamination may be classified as Conditionally Approved. Predictable seasonal or weather-related pollution events, such as overflows from sewage treatment plants (STP), could necessitate a temporary closure of an Approved growing area. The period of closure is based upon local conditions and varies with each Conditionally Approved area.

RESTRICTED If the bacteriological water quality of a commercial growing area does not meet the standard for an Approved classification, the area may be classified as Restricted if the fecal coliform concentration does not exceed a geometric mean MPN of 88 per 100 ml, and if not more than ten percent of the samples exceed an MPN of 260 per 100 ml. Shellfish harvested from restricted growing areas cannot be marketed directly, but must be relayed to an approved growing area for controlled purification.

PROHIBITED A growing area may be classified as prohibited when the sanitary survey and the bacteriological water quality data indicate that fecal material, pathogenic microorganisms, marine biotoxins, and poisonous or deleterious substances are present in dangerous concentrations. Growing areas adjacent to STP outfalls and other persistent or unpredictable pollution sources are classified as Prohibited.

Growing areas are classified as Prohibited to commercial harvest until a shoreline sanitary survey and an intensive water quality study have been completed by DOH.

No shellfish shall be harvested commercially from a prohibited area.

TABLE 2.
COMMERCIAL AREAS WHICH SHOULD BE CONSIDERED CRITICAL

AREAS BY COUNTY	CLASSIFICATION
Clallam	
Dungeness Bay	Approved
Sequim Bay	Approved ♦
Island	
Holmes Harbor/Race Lagoon	Approved
Penn Cove	Conditional ♦
Saratoga Passage	Approved
Island/Snohomish	
Port Susan	Restoration †
Jefferson	
Brinnon	Approved
Dabob Bay	Approved
Discovery Bay	Approved
Dosewallips St. Pk.	Restoration †
Duckabush	Restoration †
Fishermen Harbor	Conditional
Fulton Creek	Approved
Hedlock Bay	Approved ♦
Indian Island	Approved ♦
Jackson Cove	Approved
Kilisut Harbor	Approved
Mats Mats Bay	Approved
Norland	Approved
Oak Bay	Approved
Quilcene Bay	Approved ♦
Squamish Bay	Approved
Thorndyke Bay	Approved
Triton Cove	Approved
Kitsap	
Agate Pass	Approved
Big Beef Harbor	Approved
Liberty Bay	Restoration †
Misery Point	Approved
Nellita	Approved
Port Blakely	Approved
Port Gamble/Klallam Bay	Approved
Port Madison/Suquamish Res.	Approved
Port Orchard Passage	Approved
Raft Island	Approved
Seabeck	Approved ♦
Mason	
Annas Bay	Approved
Cass Inlet/North Bay	Restoration †
Hamma Hamma Delta	Approved
Hammersley Inlet	Approved ♦
Hartstene Island	Approved ♦
Jorsted Creek	Approved
Lilliwaup	Approved
Lynch Cove	Restoration †
Oakland Bay	Conditional ♦
Pickering Passage	Approved

Table 2. Page 2

AREAS BY COUNTY	CLASSIFICATION
Mason - continued.	
Sisters Point	Approved
Skookum Inlet	Approved
Squaxin Island	Approved ♦
Stretch Island	Approved
Tahuya	Approved
Totten Inlet/North Side	Approved
Waketickah Creek	Approved
Pierce	
Cass Inlet/Rocky Bay	Approved
Filucy Bay	Conditional
Glen Cove	Restoration †
Ketron Island/Wyckoff Shoal	Approved ♦
Oro Bay/Anderson Island	Approved
Pierce/Kitsap	
Carr Inlet/Burley Lagoon	Restoration †
Carr Inlet/Minter Bay	Restoration †
Cass Inlet/Vaughn Bay	Restoration †
San Juan	
Hunter Bay/Lopez Island	Approved
MacKaye Harbor/Lopez Island	Approved
Shoal Bay/Lopez Island	Approved
Ship Bay/Orcas Island	Approved
Westcott Bay/San Juan Island	Approved
Skagit	
Semish Bay	Approved
Similk Bay	Approved
Skagit/Island/Snohomish	
Skagit Bay	Restoration †
Thurston	
Eld Inlet	Approved ♦
Henderson Inlet	Approved ♦
Nisqually Flats	Approved
Totten Inlet/South Side	Approved
Whatcom	
Drayton Harbor/Semiahmoo	Approved ♦
Lummi Bay	Approved ♦
Lummi Island	Approved
Portage Bay	Approved
Grays Harbor	
Grays Harbor	Conditional ♦
Pacific	
Palix	Restoration †
Willapa Bay	Approved ♦

♦ Contains acreage classified as "Restricted" or "Prohibited" in certain areas, but the remainder of the area is classified as noted. Because of the "Approved" or "Conditionally Approved" portion of the area, it should be protected under the GMA.

† Area identified as "Restricted" or "Prohibited" and where point or nonpoint source pollution is known and has the potential of being corrected.

Table 3.
RECREATIONAL BEACHES THAT ARE
"SUITABLE FOR SHELLFISH HARVEST"

This list is not all-inclusive, but recommends certain beaches by county that are considered to be suitable for shellfish harvest on the basis of the substrate, public access and presence of stock. Most of these beaches are suitable also on the basis of Health monitoring, but those which are starred have current problems. They are included on this list, however, because the source of the problems is understood and there is hope the sources can be cleared in the future. Two of those beaches, Dosewallips and Belfair State Parks, on Hood Canal, represent some of the most productive public shellfish grounds in the state.

<u>Clallam County</u>	
Dungeness Bay Spit Refuge Sequim Bay State Park	Jamestown County Beach
<u>Island County</u>	
Camano Island State Park Saratoga Passage Tidelands Strawberry Point-DNR 142 & 144 Utsalady Point-Camano Island	Captain Whidbey State Park Scatchet Head Useless Bay State Park
<u>Jefferson County</u>	
Bolton Peninsula-DNR 56 Camp Harmony - DNR 57 Dosewallips State Park ♦ Fulton Creek, North of-DNR 50 Hood Head Tidelands Kala Point Spit Lions County Park Northeast of Shine-DNR 59 Oak Bay, East of - DNR 404A Old Fort Townsend State Park Point Whitney Seal Rock Forest Camp South Indian Island County Park Toandos Tidelands State Park	Brown Point-Toandos Peninsula (DNR 57B) Case Shoal-DNR 59A Fort Flagler State Park Hicks County Park-Shine Jackson Cove-DNR 55 Kinney Point Mystery Bay State Park Oak Bay Park Oak Head - Toandos Pleasant Harbor State Park Port Discovery Shine Tidelands State Park Tabook Point-Toandos Peninsula (DNR 57) Wolfe Property State Park
<u>King County</u>	
Burton County Park	South of Peter Point-DNR 77
<u>Kitsap County</u>	
Agate Pass Fay Bainbridge State Park Miller Bay Point No Point-DNR 68/69 Kitsap Memorial State Park	Anderson Cove-DNR 40 Illahee State Park Oldman House State Park Point Southworth Scenic Beach State Park
<u>Mason County</u>	
Belfair State Park ♦ Cushman Park, Potlatch Dewatto Bay, South head - DNR 44 Hood Canal Recreational Park Island State Park McMicken Island State Park Potlatch State Park Twanoh State Park	Eagle Creek Recreational Tidelands Dewatto, North of DNR Beaches 46/47/48 East Hartstene Island - DNR 24 Hoodsport Hatchery, North of - DNR 43 * Lilliwaup Tidelands State Park Miller Creek, South of - DNR 43 Rendsland Creek Rec. Area

Table 3: continued.

<p>Cutts Island State Park Fox Island-Near Bridge Narrows-DNR 36 Purdy Sandspit Sunrise Beach County Park</p>	<p><u>Pierce County</u></p>	<p>Eagle Island State Park Kopachuck State Park Penrose Point State Park RFK Recreational Area-Whitman Cove Wyckoff Shoal</p>
<p>Doe Island State Park English Camp-San Juan Island James Island State Park Matia Island State Park Patos Island State Park San Juan County Park Spencer Spit State Park</p>	<p><u>San Juan County</u></p>	<p>Echo Bay-Sucia Island Fossil Bay-Sucia Island Jones Island State Park Mud Bay-Lopez Island State Park Reid Harbor State Park Snoring Bay State Park-Sucia</p>
<p>Bayview State Park Maury Island-DNR 83 Saddlebag Island State Park Sinclair Island Dock Young County Park-Guemes Is.</p>	<p><u>Skaqit County</u></p>	<p>Carter Point, Lummi Island Pelican Beach - Cypress Island Samish Island Recreational Site - DNR Williams Point-Samish (DNR)</p>
<p>Keyak Point County Park</p>	<p><u>Snohomish County</u></p>	
<p>Burfoot County Park Frye Cove County Park</p>	<p><u>Thurston County</u></p>	<p>Nisqually Reach Tolmie State Park</p>
<p>Birch Bay State Park Clayton Beach State Park Semiahmoo Spit ♦</p>	<p><u>Whatcom County</u></p>	<p>Chuckanut Bay Point Roberts Lighthouse</p>

♦ POLLUTION PROBLEMS EXIST ON THESE BEACHES, AND HARVEST SHOULD NOT OCCUR UNTIL THE POLLUTION SOURCES ARE CORRECTED. IT IS FELT THE PROBLEMS ARE CORRECTABLE WITH REMEDIAL ACTION OVER TIME.

Shoreline Management

This document covers very specific subjects related to the Growth Management Act (GMA) and is designed to help local governments establish policies and programs capable of protecting valuable shellfish resources and reducing non-point pollution.

It is important to recognize that other programs exist in the State of Washington which are similar to the GMA in intent. The Shoreline Management Act (SMA) is one such program. It regulates the type of activity on Washington's shorelines and is implemented by local Shoreline Master Programs (SMPs). The SMA and the GMA complement each other greatly, when closely coordinated. This is true for several reasons, including but not limited to:

- ▶ SMA preferred use priorities, (aquaculture is a recognized shoreline preferred water dependant use),
- ▶ Shorelines of State-Wide Significance priorities (RCW 90.58.020) acknowledging preservation of the natural character of the shoreline as a top priority, (this policy works to preserve habitat and fragile resources, including shellfish beds),
- ▶ SMPs are "Planning" documents, addressing where new shoreline development should locate (by establishing or revising shoreline environment designations such to protect designated shellfish growing areas a potentially strong measure of local control exists),
- ▶ SMPs include regulations and a permitting system to control shoreline development activities including marinas (requiring sewage pumpout facilities), shoreline clearing and grading activities, buffers and density requirements, etc.,
- ▶ SMPs can be used as a vehicle for designing a permit system for critical shellfish areas,
- ▶ Public trust principals (addressing navigation, fishing, commerce, etc.), many of which are embodied in the SMA.

Water-dependant Uses

An important part of the SMA is a provision for local jurisdictions to restrict shoreline uses to those considered "water-related" or "water-dependent". This type of provision protects the sensitive and unique nature of shoreline areas from types of development that do not need to be located there. Water dependency is a criteria used by the U.S. Army Corps of Engineers in its "public interest review" of proposals to build on wetlands (i.e., Section 404 permit requirements under the federal Clean Water Act). If a use is not "water-dependent" it is presumed that the use could be accommodated elsewhere (i.e., in a location which would not require the destruction or damaging of a wetland).

It is common for state wetlands management programs to incorporate similar water dependency criteria. Under New Jersey's Coastal Area Facility Review Act, coastal development is regulated under a set of specific Coastal Resource and Development Policies. These policies prohibit development in coastal wetlands unless certain conditions are met -- a key condition being that the proposed use or activity is water-dependent. "Water-dependant" is specifically defined in the policies to mean "development that cannot physically function without direct access to the body of water along which it is proposed."

Localities have also adopted similar approaches. A notable example is Portland, Maine which recently passed a citizen referendum requiring changes to its zoning code that restrict the city's waterfront areas to water-dependant forms of development. Specifically, the referendum prohibits hotels, motels, and residential uses which are not considered one of the following uses: 1) fishing activities; 2) maritime activities; 3) functionally water dependent activities, and 4) authorized public uses. Each of these categories is further defined in the referendum.

Water dependency is an excellent tool for managing shorelines in critical areas. It does not, however, address upland uses that cause water pollution and should not be used as the sole method of protecting aquatic resources. Establishing criteria through Comprehensive Plans, zoning, master programs, SEPA ordinances and other tools is therefore essential to achieve desired protection levels in critical areas.

SECTION II.

Water Quality and Shellfish

Characteristics of Runoff and Pollution

In an undisturbed environment, rain falls to the ground and is either taken up by vegetation, absorbed by soils and passed into the ground water, or runs off as surface water. Changes in land-cover, such as clearing and construction, effect the hydrology and ultimately the water quality in the area. As development occurs, water that was once used by vegetation or absorbed into the ground is diverted by impervious substances. Pollutants carried by water change in composition and concentration.

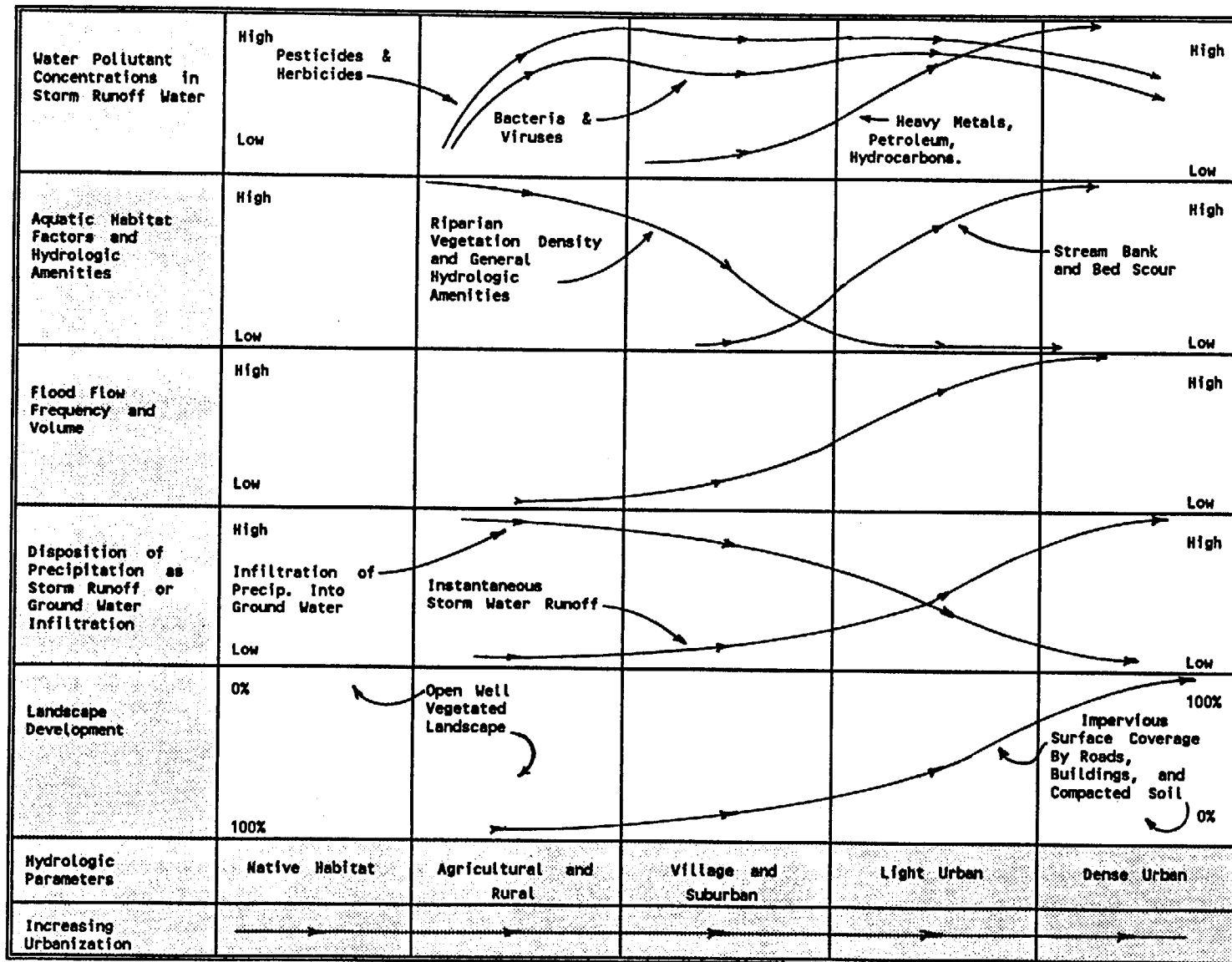
Loads of lead, zinc, copper, and other metals increase when development replaces the natural environment ¹ (Figure 1). Studies have shown that the majority of pollution found in urban runoff originates from streets, construction sites, and lawns/gardens ², but also that oxygen-demanding substances and suspended solids can reach levels comparable to secondary sewage outfalls.

Impervious material in developed areas elevate stormwater runoff levels and increase flood frequency. This increase in volume and velocity erodes stream banks and increases turbidity, adversely effecting fish and wildlife habitat³ (Figures 1 and 2). In addition to erosion, flooding produces increased sedimentation and pollution in receiving waters^{4, 5}.

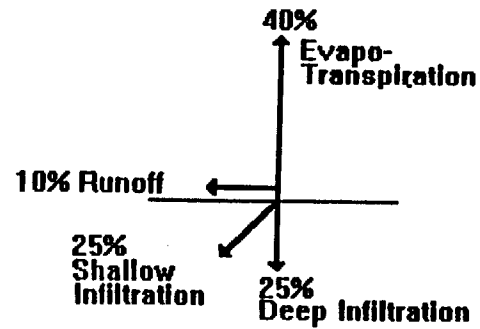
Pollution sources, types, and amounts are extremely varied. Leaks, spills and emissions from motor vehicles, failing on-site sewage disposal systems, chemical products used in gardening and yard maintenance, animal wastes, effluent from boats and marinas, and urban runoff contribute greatly to pollution. The *cumulative* effects of these activities within a single watershed can drastically effect water quality and critical shellfish resources.

Finally, reduced infiltration of rain into the groundwater reduces well water levels, increases frequency and volume of flood flows, and lowers stream flow levels during the summer months. Often, lower stream levels negatively effect fish habitat⁶.

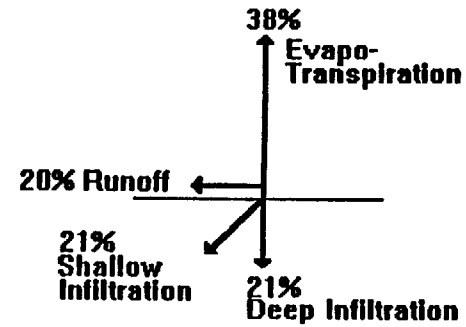
FIGURE 1 Diagram of Progression of Cumulative Effects of Urbanization on Hydrologic Characteristics. (Taken from Canning, 1988).



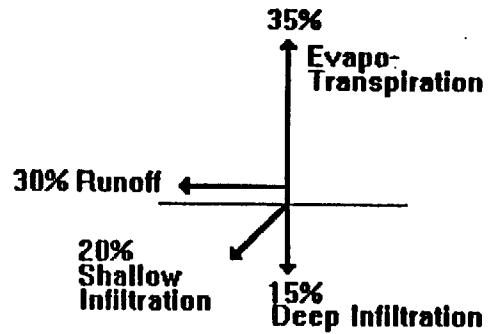
(TO BE READ AS A PROGRESSION FROM LEFT TO RIGHT)



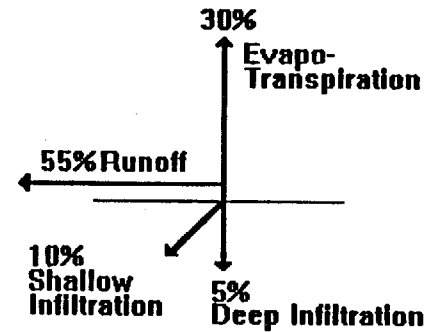
Natural Ground Cover



10-20% Impervious



35-50% Impervious



75-100% Impervious

Source: J.T. Tourbier and R. Westerscott. *Water Resources Protective Technology: A Handbook of Measures To Protect Water Resources in Land Development*. p. 3.

FIGURE 2 Typical Changes in Runoff Flows Resulting From Paved Surfaces.

The Shellfish Resource

Washington State is one of the leading shellfish-producing areas in the country and is the largest supplier of oysters. Recent Washington Department of Fisheries data indicate the total 1990 commercial harvest of oysters, clams and mussels in Washington State exceeded 15 million pounds, with an approximate value of 52 million dollars. In addition, Fisheries estimates that over one million recreational clam diggers annually harvest over 3.3 million pounds (1987 figure). Fisheries further estimates that in 1986 approximately 6,600 gallons of oysters were harvested in Hood Canal alone.

The shellfish industry employs an estimated 1,500 persons statewide. The income earned by these employees is extremely important to rural economies that have been hard hit by slowing timber sales and other economic problems. In Mason county, the shellfish industry is the second largest employer and in Pacific county the industry employs 1 out of every 12 persons.

There are additional values to shellfish. Some of these include:

- ▶ Healthy shellfish are considered to be an early indicator of water quality.
- ▶ Historical and cultural importance.
- ▶ Tribal ceremonial uses.
- ▶ Tribal member sustenance.
- ▶ Recreational and tourism opportunities.
- ▶ Juvenile crab habitat.

Pollution Problems Relating To Shellfish

Two types of contamination affect shellfish, chemical and bacterial/viral. Filter feeding shellfish concentrate substances in the water column into their tissues as they feed, including bacteria, viruses, and toxins.

Chemical contamination of shellfish can take many forms and is often associated with human industrial, commercial, and residential land use activities. Low levels of toxicants have been detected in some urban bays but effects of chemical contamination on humans and shellfish are not widely known. Chemical residues have been found in shellfish tissue years after the source has been removed, however. Toxic Water Quality Standards, WAC 173-201-047, establish limits on contamination of water resources and 173-204 WAC establishes marine sediment quality standards.

Shellfish can accumulate harmful levels of naturally occurring toxin during blooms of certain kinds of microscopic marine plants. *Paralytic Shellfish Poisoning (PSP)* can be fatal. Although plankton blooms occur naturally, some

scientists believe that high levels of organic pollutants may increase the frequency, intensity, and duration of blooms. Because of the threat to human health, tests are routinely taken by the DOH and a volunteer corps for PSP, particularly during the summer months.

There have been hundreds of reported cases of illness or death related to shellfish bacteria and virus contamination in the last 50 years⁷ (Table 4). Contamination has led to the closure of thousands of acres of shellfish harvesting area in the United States since 1831. Currently, shellfish harvesting restrictions and closures in commercial areas in Washington threaten the continuation of an economically vital industry.

TABLE 4. *Documented cases of hepatitis A associated with shellfish consumption through 1983.**

Year	Reported Cases ^b	Vehicle of Transmission	State(s) ^c
1961	84	Oysters	Alabama, Mississippi
	459	Clams	New Jersey, New York
	15	Clams	Connecticut
	31	Oysters	Alabama
1962	3	Clams	New York
1964	249	Clams	Perinsylvania (New Jersey Clams)
	123	Clams	Connecticut, Rhode Island
	3	Oysters	North Carolina
	43	Clams	New York
	3	Clams	District of Columbia (N.J. Clams)
1966	4	Clams	New Jersey (Massachusetts, Maryland Clams)
	3	Clams	Massachusetts
	4	Clams	New Jersey (Massachusetts Clams)
1968	3	Clams	New York
1969	6	Clams	New York

Year	Reported Cases ^b	Vehicle of Transmission	State(s) ^c
	13	Oysters	Florida
1971	5	Clams	Massachusetts
	3	Clams	Rhode Island
1972	2	Clams	Florida, Massachusetts (Florida Clams)
1973	293	Oysters	Georgia, Missouri, New Mexico, Oklahoma, Texas (Louisiana Oysters)
1977	17	Shellfish Unspecified	Washington
1979	8	Shellfish Unspecified	Unspecified
	10	Oysters	Alabama, Georgia (Florida Oysters)
1982	11	Clams	New York (Massachusetts, North Carolina, New York, and/or Rhode Island Clams)

^aTaken from Verber, 1984.

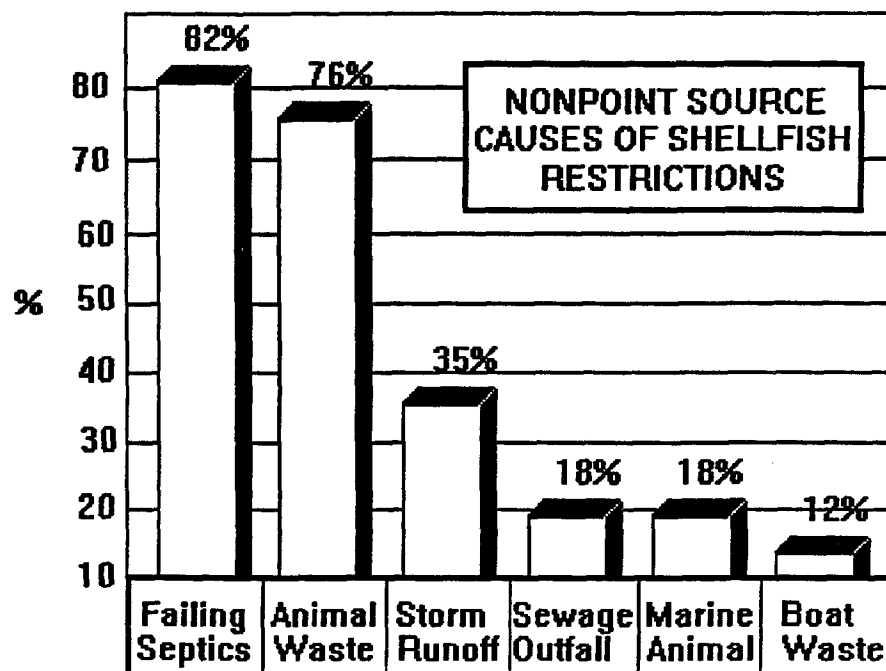
^bTotal number of reported cases from one or more outbreaks.

^cListing includes states where outbreaks occurred and states from which shellfish were obtained, if specified.

Fecal coliform (FC) bacteria are the standard by which water quality is determined from the public health perspective, and are the primary cause of shellfish bed closures. Concentrations indicate the possible presence of *pathogens*, disease causing organisms.

In Washington, shellfish areas have been closed to harvest since early in the 1950's. The early closures were due primarily to point source pollution from sewage outfalls in urban areas. More recent closures are due to nonpoint pollution, mainly from failing septic systems in rural residential areas and poor agricultural practices. Urban stormwater runoff, boats and marinas, forestry practices, clearing and grading in developing areas, and increased seal populations have further contributed to elevated fecal coliform bacteria levels (Figure 3).

Figure 3



NOTE: Percentages add up to more than 100% because contamination of shellfish beds is often the result of more than one source of pollution.
Source: Department of Ecology Shellfish Unit.

Currently there are 75,000 acres within the Puget Sound identified by the Department of Health as commercial growing areas. Of these 75,000 acres, 28,500 (1990 figure) acres are subject to harvest restrictions due primarily to elevated fecal coliform levels (Table 5). Also, of beaches listed for recreational shellfish harvest, 39%(57) are currently considered public health risk areas and 24%(35) are threatened.

TABLE 5: Commercial Shellfish Growing Area Reclassifications Department of Health, June 1991.

Year	Area	From	To	Source(s)	Species	Acres
1981	Burley Lagoon	Approved	Restricted	Rural Nonpoint	Oysters and Clams	480
1982	Minter Bay	Approved	Restricted	Rural Nonpoint	Oysters	93
1983	Penn Cove	Approved	Prohibited	Point: STP	Mussels	500
1983	Lower Eld Inlet	Approved	Conditional	Rural Nonpoint	Oysters and Clams	600
1984	North Quilcene Bay	Approved	Prohibited	Rural Nonpoint	Oysters	200
1984	Henderson Inlet	Approved	Conditional	Rural Nonpoint	Oysters and Clams	300
1986	South Skagit Bay	Approved	Restricted	Rural Ag.	Softshell Clams	2,900
1987	Port Susan	Approved	Restricted	Agriculture/STP	Softshell Clams	6,100
1987	Dosewallips Tidelands	Approved	Restricted	Marine Mammals	Oysters and Clams	180
1987	Oakland Bay	Conditional	Restricted	Point/Nonpoint	Oysters and Clams	820
1987	Lynch Cove	Approved	Prohibited	Nonpoint	Oysters and Clams	630
1988	Duckabush Tideland	Approved	Restricted	Rural Nonpoint	Oysters and Clams	210
1988	Drayton Harbor	Approved	Prohibited	Rural Nonpoint	Oysters and Clams	500
1989	North Skagit Bay	Approved	Restricted	Rural Nonpoint	Softshell Clams	2,500
1989	Bay Center	Approved	Restricted	Rural Nonpoint	Oysters	100
1991	Liberty Bay	Conditional	Restricted	Nonpoint	Oysters	260
1991	North Bay (Case Inlet)	Approved	Prohibited	Rural Nonpoint	Oysters and Clams	1,387

What Is Being Done?

There are several things that are being done to correct nonpoint pollution problems in the Puget Sound region:

- ✓ Watershed planning under the Puget Sound Water Quality Management Plan.
- ✓ Washington State Revolving Fund (SRF) loans.
- ✓ The Centennial Clean Water grant program.
- ✓ Shellfish Protection Initiative project (Ecology/Health).
- ✓ Enforcement action taken by Ecology's regional offices.
- ✓ Enforcement action taken by local health departments.
- ✓ Various local government projects.
- ✓ Intensive water quality sampling by DOH and of sources (streams, etc.) by counties.
- ✓ General permit for dairy wastes.
- ✓ Stormwater planning under the Puget Sound Water Quality Management Plan.
- ✓ Revisions to state on-site WACs and encourage use by counties.
- ✓ Pump-out/dump-out For Boats by State Parks and the Boating Task Force (1991 Puget Sound Water Quality Management Plan -- MB-4).
- ✓ Voluntary clean-up actions of private citizens and volunteers.
- ✓ Public education projects (LHDs, PIE funds, etc.).
- ✓ The Shoreline Management Act implemented through local Shoreline Master Programs.
- ✓ And now, shellfish areas are required, under the Growth Management Act to be designated and protected as critical areas.

SECTION III.

PROTECTING WATER QUALITY THROUGH LAND MANAGEMENT

As stated in Section I, counties and cities required or electing to plan under the Growth Management Act must prepare a Comprehensive Plan addressing the following areas:

- ▶ Land Use
- ▶ Capitol Facilities
- ▶ Transportation
- ▶ Rural Land Use (Counties only)
- ▶ Housing
- ▶ Utilities

This section provides reviews of alternative and often innovative management tools and approaches to combat deterioration of water quality. Ideas found in these examples can be used or adopted at the local level to accomplish regional goals. Wherever possible, examples of practices from different jurisdictions around the country are examined.

Density and Use

Use Designations

Since the activities permitted in critical areas have direct implications for water quality and other local management objectives, designation of permissible-land-use zones is an important and effective tool. Use designations can be assigned at a broad and general level -- as in a land use plan diagram (e.g., allocating basic categories of residential, commercial, agriculture, open space) -- or in a much more detailed and specific manner, as in a typical zoning ordinance with multiple residential zones.

Requirements for specific land use can be described in local zoning ordinances as "district designations". Examples are taken and paraphrased from the Thurston County Zoning Ordinance - September 1, 1980.

Low Density Residential District

The Low Density Residential District can preserve the semirural residential character of an area and prevent urbanization in areas restricted by one or more of the following conditions:

1. Limited traffic access and circulation due to geographic constraints.
2. A predominance of soils with limitations for intensive development.
3. Steep slopes, watercourse or waterfront areas where erosion, earth slippage and water runoff present limitations for intensive development.

Agriculture District

This designation encourages farm operators by providing a predictable future for agricultural resources and preserves agricultural land and timberlands. It allows nonagricultural uses which are compatible with farm operations in Agricultural Districts, but protects agricultural operations from nuisance complaints. As a special district, it makes governmental bodies and the general public aware of the presence and importance of farm lands.

Planned Industrial Park District

The Planned Industrial District encourages comprehensive planning for entire industrial sites as a unit. It provides for industrial development while protecting the uses of nearby land and helps stabilize property values. The district is characterized as being on or near a major arterial highway or other transportation facilities, and close to developing cities, developing community centers or relatively intense residential development.

Controls to provide freedom from nuisance-creating features such as noise, dirt, odor, vibration, air and water pollution, are established, together with adequate traffic circulation, open space and landscaping, compatibility with surrounding residential, commercial or other development and protection from industrial blight. Standards are designed to be particularly attractive to research and development, small precision part and merchandise distribution industries.

Geologically Sensitive Area District

This district provides for residential, commercial, and agricultural uses of a type and density which will minimize the potential for contamination or significant loss in recharge capacity of a vulnerable groundwater aquifer and potable water source of great importance to the general public. This exercise of the police power (regulatory power) is necessary to preserve the public health, safety, and welfare.

Density Regulation

Jurisdictions across the country manage the density of development through zoning or subdivision ordinances. Development densities are often restricted in high slope areas, for instance, to minimize runoff impacts and erosion, to reduce the hazards associated with slope failure, and to reduce the public and private development and facility costs. Density has been regulated in groundwater recharge zones and wellhead areas to minimize the nonpoint pollution effects on groundwater caused by such development, particularly from on-site waste disposal.

It is now common to also regulate the density of development in and around water bodies such as lakes, ponds, and marine waters, particularly where public sources of drinking water are involved. Reducing density in these critical water quality areas minimizes pollutants that make their way into these water bodies from chemically-treated lawns, septic drainfields, asphalt, etc.,. Numerous examples can be cited from around the country.

The North Carolina Coastal Area Management Act (CAMA) include density components in addition to use provisions. A number of Piedmont communities have imposed density restrictions in critical water quality zones to protect drinking water sources. The local efforts are further buttressed by a new state surface water classification system that protects waters at the state level (North Carolina Division of Environmental Management, 1987). In the Orange County zoning ordinance a minimum lot size of 80,000 square feet is required in Water Quality Critical Areas. In Protected Watershed Districts (watersheds draining into drinking water sources), the minimum lot size for an industrial use is 200,000 square feet.

The Maryland Critical Areas program also incorporates density regulation, stating that "land...may be developed for residential uses at a density not to exceed one dwelling unit per 20 acres" in resource conservation areas. Although the state stipulates overall density, localities may select the appropriate regulatory tools to achieve/maintain this density. Mechanisms such

as cluster development, transfer of development rights, minimum and maximum lot size provisions, and/or additional means to maintain the land area necessary to support the protective uses, are encouraged.

Under Maine's state minimum shoreline zoning ordinance, residential lots must be a least 20,000 square feet if unsewered and 10,000 feet if sewerred. Some local jurisdictions have gone beyond this requirement. In recent years extensive recreational development has resulted in substantial increases in nonpoint pollution. The town of Bridgton now requires at least 60,000 square feet for lots around recreational lakes and pond. Bridgton further controls density along sensitive shorelines by regulating the *dimensions* of shoreline lots, reducing the number of units immediately adjacent to and draining into a water body. Lots abutting lakes, ponds, river or streams must have a minimum shoreline frontage of 150 feet "measured in a straight line between the points of intersection of the side lot lines with the shoreline at normal high water elevation". The shoreline zoning ordinance required by the state stipulates a minimum lot frontage of only 100 feet.

The Wisconsin Model Shoreland Zoning Ordinance, prepared by the Wisconsin Department of Natural Resources, is similar in its restrictions to those required in Maine. Development lots along shorelines must be a minimum of 20,000 square feet where not served by a sanitary sewer, and 10,000 square feet with a sewer service. All buildings along the shoreline must be set back at least 75 feet from the ordinary high water mark.

Please remember that sensitive areas may need considerably more protection than what is described in the above examples. Development lots on a typical shoreline may be required to have certain minimums, but in a critical watershed, local planners may wish to increase the requirements to provide additional protection (i.e. 30,000 square feet in a unsewered area and 20,000 square feet in a sewerred area).

The following is a local example of Rural Residential density levels, paraphrased from the Thurston County Zoning Ordinance - September 1, 1980, divided into three categories.

Rural Residential - 1 Dwelling Unit Per 5 Acres

This level was designated to allow some development in areas with commercial timber and in areas where severe limitations occur for either water supply, aquifer recharge, flood plains or proper functioning of on-sites.

Rural Residential - 1 Dwelling Unit Per 2 Acres

This density level was designated to enhance and preserve the rural agriculture character in areas where there is currently little development and which are characterized by: (a) farms, forestry activities, and large residential parcels; (b) being distant from community services necessary to support development of a suburban or urban character; or (c) having substantial areas of moderate to severe physical limitations for development.

Rural Residential - 1 Dwelling Unit Per Acre

This density level permits development in areas characterized by one or more of the following: (a) a large percentage of soils with moderate to severe physical limitations for development; (b) being adjacent to areas having higher residential densities and availability of community services; (c) situated so that they have potential for scenic views and/or water access; or (d) located at a substantial distance from the urban core.

Despite the fact that it is desirable to limit density in critical areas, it is not the goal to reduce density. The goal is to lower the **impacts** of density to the lowest level possible.

Use Restrictions in Environmental Areas or Overlay Zones

Special use restrictions on development may be incorporated in local overlay zones. In North Carolina, for example, Orange County has enacted a "Water Quality Critical Area" overlay zone adjacent to water supply impoundments. To prevent degradation of public drinking water supplies, it places restrictions on the types of uses permissible in the zone (while residential uses are permitted, all industrial and commercial uses are not). The Alamance County Watershed Protection Ordinance provides similar restrictions, specifically prohibiting the following uses in its Water Quality Critical Areas:

1. Commercial use which sells, stores, or distributes motor fuel or other hazardous materials;

2. Airports;
3. Industrial uses;
4. Landfills, incinerators, and waste processors;
5. Metal salvage facilities including junkyards;
6. Manufacturing use or storage of any hazardous or toxic materials waste as listed on the EPA hazardous material list or determined by Alamance County Board of Commissioners; and,
7. Public or private sewage disposal systems except for subsurface septic tanks. Community sewage treatment facilities may be allowed if the Health Department determines that a public health problem can be alleviated by constructing sewage facilities (Alamance County, N.C., 1987, p. 1).

A Washington State example of how overlay zones can be included into local ordinance can be found in Island County's Chapter 17.02 Zoning Ordinance (Appendix 10).

Development and Conservation Zones: Land Use Classification Systems

There are state and local *use* restrictions designed to protect water quality and other environmental values. In North Carolina, coastal localities must prepare land use plans which include a land classification system and map. Not intended as a strict regulatory mechanism, their land classification system is intended to serve as a tool to describe where specific local implementation actions and policies will apply in the future. The North Carolina Coastal Area Management Act (CAMA) regulations use five categories to classify land: developed, transition, community, rural, and conservation. Each of these classes is specifically defined and described in the North Carolina CAMA regulations. The following descriptions of the five categories are excerpted from these regulations:

- ▶ *Developed*: "Areas. . . currently urban in character where minimal undeveloped land remains and have in place, or are scheduled for the timely provision of, the usual municipal or public services. . . includes mixed land use such as residential, commercial, industrial, institutional, and other uses at high to moderate densities. . ."

- ▶ *Transition:* "Areas. . . presently being developed for urban purposes or will be developed in the next five to ten years to accommodate anticipated population and urban growth. These areas are in, or will be in a 'transition' state of development going from lower intensity uses to higher intensity uses and as such will eventually require urban services. . ."
- ▶ *Community:* "Areas. . . presently developed at low densities which are suitable for private [on-site system] use. These areas are clustered residential and or commercial land uses which provide both low intensity shopping and housing opportunities and provide a local social sense of a 'community'. . ."
- ▶ *Conservation:* "Areas. . . include. . . but [are] not limited to public trust waters, estuarine waters, coastal wetlands, etc., other similar lands, environmentally significant because of their natural role in the integrity of the coastal region and include but are not limited to bottom-land hardwoods, pocosins, swamp forests, areas that are or have a high probability of providing wildlife habitat, forest lands that are essentially undeveloped and land which otherwise contain significant productive, natural, scenic, cultural or recreational resources. . ."

In Oregon coastal estuaries are divided into three basic use categories: natural, conservative and development. While localities implement this system through local land use plans and development ordinances, the state establishes the more specific uses and activities which are permissible in the three different zones, as well as uses conditional upon additional resource capabilities tests. (See Oregon Department of Land Conservation and Development, 1987). For instance, within natural management units few alterations are permitted. Undeveloped low-intensity, water dependent recreation is permitted by right in these areas; boat ramps for public use where no dredging or fill is required are contingent uses. More extensive "disturbances" are permitted in development units. Here water-dependent commercial uses are permissible even when dredging and fills are required. Non-water-dependent uses which do not require dredge or fill are identified as conditional uses.

Under Maine's Mandatory Shoreland Zoning Act, the Minimum Shoreland Zoning Ordinance stipulates that the 250 foot shoreline zone be divided into three use zones: a Resource Protection District, a General Development District and a Limited Residential-Recreational District. While municipalities have no choice but to include these areas in Resource Protection Districts, they have the option of also including the following: other significant wildlife habitat, natural sites of significant scenic or aesthetic value; areas designated by federal, state, or municipal governments as natural areas of significance to be protected from

development; and other significant areas that should be included to achieve the purposes of the ordinance. The ordinance specifies land use and activities permitted in each of these broad zones: i.e. residential dwelling units are permitted in General Development Districts but not in Resource Protection Districts.

As a final example, in Maryland the Chesapeake Bay Critical Area Protection Act fosters environmentally sensitive development in the Chesapeake Critical Area, thereby minimizing damage to natural habitats and water quality. The program includes all Chesapeake Bay tidal waters, the 100-year tidal floodplain and extends 1,000 feet beyond the landward boundaries of state or private wetlands. Local governments may expand the boundaries of their critical area, but they cannot reduce it below the 1,000 foot minimum. Within the management area, local jurisdictions are required to incorporate state criteria into their plans and permitting process. The criteria addresses habitat protection, water dependant facilities, agriculture, surface mining, and development.

To minimize the impact of growth on water quality, Maryland's Critical Area Nonpoint Program has three land use categories: Resource Conservation Areas, Limited Development Areas, and Intensely Developed Areas.

- ▶ Resource Conservation Areas (RCAs) generally consist of one dwelling every five acres, no public sewer or water, and mostly consist of wetlands, forests, and cultivated or uncultivated land. Overall density within a RCA is restricted to one dwelling every 20 acres. Biological productivity, species diversity and other ecological values are protected and enhanced through local government programs and ordinances. Development activities within the RCA must also comply with Limited Development criteria.

Only five percent of a individual county's RCAs may be redesignated as IDAs or LDAs. Federally owned property or acreage located in tidal wetlands cannot be redesignated.

- ▶ Limited Development Areas (LDAs) generally consist of one dwelling every five acres to four dwellings per acre. LDAs have water and/or public sewer programs, and the land is mixed with, but not dominated by wetlands, agriculture, and open space. Nonpoint source controls in LDA include restricting the total amount of removed timber on any single development to 20 percent, limiting the area of impervious service to 15 percent on any given site, restricting stream alteration, encouraging cluster development, and requiring replacement of cleared timber land elsewhere in the critical area on a one-to-one basis.

- ▶ Intensely Developed Areas (IDAs) are usually consist of dense residential or commercial development. IDAs have public sewer and water and have four or more dwellings per acre. Nonpoint source reduction is accomplished by protecting remaining wooded areas and enhancing vegetation in newly developing areas, and requiring local governments to conduct water quality assessments and programs that protect natural habitats.

Nonpoint pollution controls that apply to the entire critical area include:

- 1 The establishment of a minimum 100 foot buffer landward from the mean high water line of tidal waters, streams, and wetlands.
- 2 The establishment of a minimum 25 foot buffer around non-tidal wetlands.
- 3 A limitation on timber harvesting within 50 feet from the bay and tributary systems.
- 4 Mandatory development of soil conservation plans and best management practices.

Urban Growth Boundaries

An important management strategy is to separate urban or urbanizable areas from resource areas. Washington's Growth Management Act mandates the creation of Urban Growth Boundaries (UGBs) in all rapidly growing areas. In Oregon all municipalities must designate UGBs, within which urban growth and development is permissible and desirable. Each boundary must be drawn in such a way as to include enough land to accommodate approximately twenty years of growth (Beatley and Brower, 1988). Land outside the UGB is reserved for resource uses (agriculture, forestry) and is generally not available for urban development. Such an arrangement seems to promote a more compact and contiguous pattern of development which in turn serves numerous social goals: protection of productive resources, provision of more efficient urban services, and prevention of visual clutter.

Note: Urbanization negatively affects shellfish quality and should not be allowed in critical and natural resource areas.

Transfer of Development Rights

Paraphrased from Washington State Department of Community Development's Draft *Transfer of Development Rights Programs: A Guide to Protecting Resource Lands*.

Transfer of Development Rights (TDR) programs are a system of "land banking." The programs will designate *preservation areas*, where little or no development is allowed. Other areas are designated as *growth areas*, where higher density development, residential or commercial, is permitted and even encouraged. Local government can grant or assign certain development rights to property owners in the preservation, or *sending area*; the landowners may then sell those rights or transfer them to land in a growth, or *receiving area*. Once the transfer has been made, there is usually a conservation easement attached to the deed on the land in the sending area which permanently restricts development. This can be an effective method for preserving historic landmarks, open space and agricultural lands.

TDR programs have been established throughout the country, although to date, only a small percentage of programs have actually had TDR transactions occur. Of those, only a handful can be considered successful in accomplishing their goals. One of the most successful programs was designed to protect agricultural land in Montgomery County, Maryland. Since 1980, 16,000 acres have been protected through TDRs.

In Washington, Island County enacted a TDR program in 1984 to protect agricultural, forest lands, wetlands and open space. Island County has had two transactions in the seven years the program has been in place, protecting approximately 40 acres of land (See Appendix 10 for an extract from Island County's Chapter 17.02 on TDRs). The city of Seattle has a TDR program to protect low income housing in the downtown area. Since 1985, they have had five projects using TDRs.

Based on the experience in TDR jurisdictions, several design and implementation issues need careful attention when a TDR program is being developed.

1. One of the most difficult and most important steps in establishing an effective TDR program is to designate adequate receiving areas. It is critical that receiving be designated in areas where there is a market for high density development. These areas must have the necessary infrastructure (i.e. sewer and water) to accommodate the desired density.
2. Developers should have some incentive to buy TDRs. This is done by locating receiving areas in the right places and not

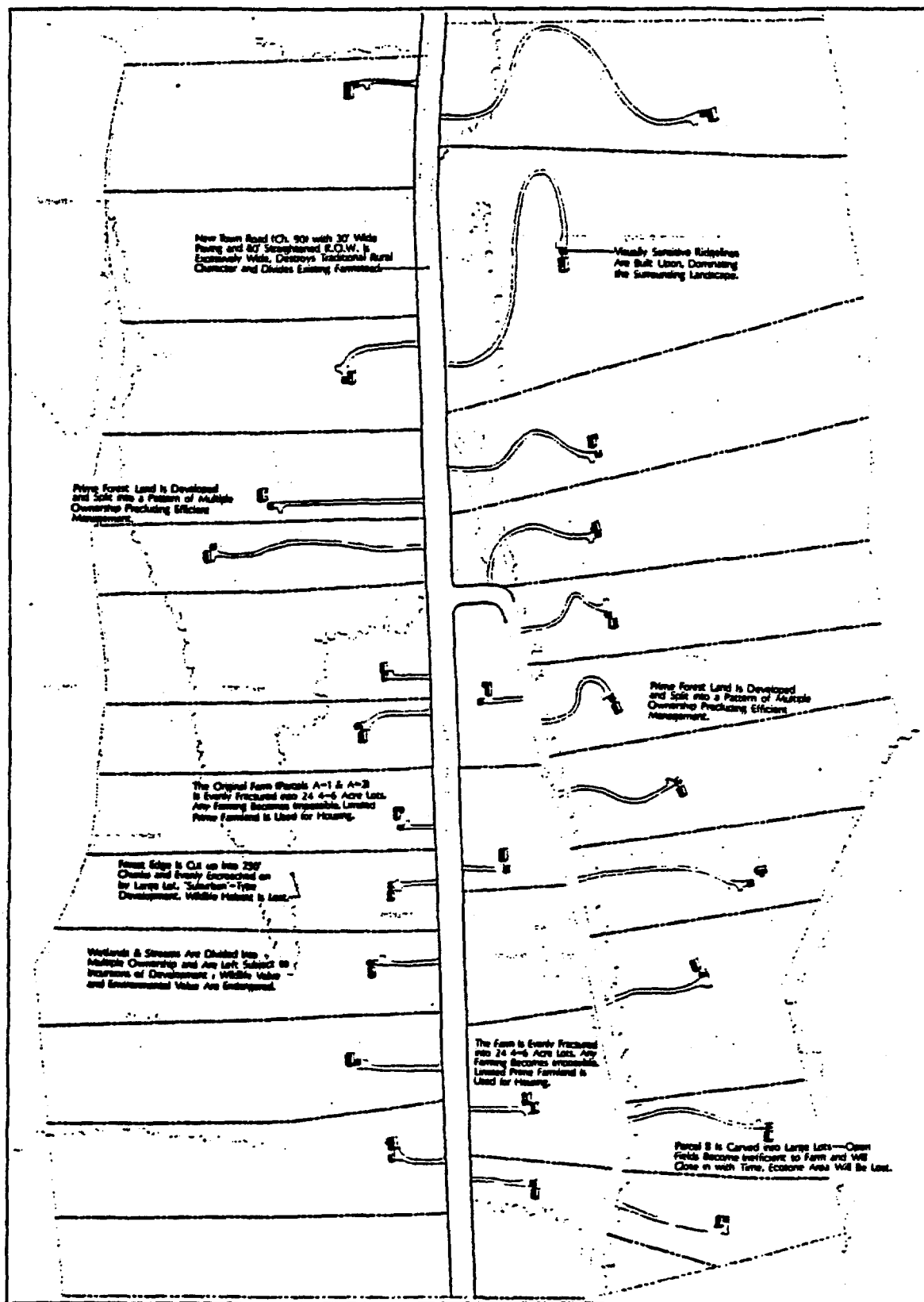
allowing any other avenues to higher densities (i.e. through rezones or variances).

3. Landowners in the sending area should have some incentive to sell their development rights--this is typically done through downzoning and then allocating TDRs.
4. It helps to make the program and the ordinances implementing it simple, flexible, and understandable.
5. TDR programs are more effective if launched with an aggressive education and outreach program targeting landowners, developers, realtors and the general public from the very start.
6. Washington jurisdictions could consider using county-wide planning policies, mandated by ReSHB 1025, to negotiate sending and receiving areas.

Clustering and Density Bonuses

Clustering involves concentrating the bulk of a site's permissible density to discrete portions of the parcel or site. Clustering minimizes the impact of urban development, allowing relatively substantial portions of the site to remain in a natural state and retain much of its environmental value (Figure 4a and 4b). Houses may be clustered, for instance, to prevent destruction of important wetlands, or to maximize distance from a floodplain or a sensitive stream. Open space improves the water quality by allowing runoff to be naturally filtered.

Local clustering provisions can be mandatory, but are often optional or voluntary. The practice can be encouraged locally by providing density bonuses as an incentive. If a developer, for instance, concentrates development on a certain portion of the parcel away from an important natural resources, the developer may be given permission to increase the number of dwelling units. Boulder County, Colorado offers an example. In much of the county, particularly in prime farming areas, permissible development density is one dwelling unit per thirty-five acres. However, under the County's "Non-urban Planned Unit Development" provisions, a developer can obtain an additional unit per thirty-five acres if he or she agrees to cluster the units. Specifically, all development must be clustered on 25% of the parcel, and the remaining 75% must be placed under an easement which prevents future development on this portion of the parcel. Such an arrangement leads to a more efficient pattern of development and retains the bulk of the land for agricultural and open space



Source: *Dealing With Change in the Connecticut River Valley: A Design Manual for Conservation and Development*, Massachusetts Department of Environmental Management, December 1990.

FIGURE 4a Conventional Development.

uses (for a more detailed explanation of the Boulder County program see Beatley and Brower, 1988).

The Austin, Texas Comprehensive Watersheds Ordinance has an interesting density bonus provision. In water-supply watersheds, three management zones are delineated (a critical water quality zone, a water quality buffer zone and an uplands zone). Incentives encourage developers in these zones to donate acreage to the city via fee simple, thus leaving the most critical areas undeveloped. The incentives include relaxation of impervious surface requirements. For each acre of land in the critical water quality zone (the zone directly adjacent to a waterway) donated, the developer is given an additional 20,000 square feet of impervious cover in the uplands zone (the zone farthest away from the water way).

There are several counties in Washington have clustering elements to local zoning ordinances. Island County for example, allows planned residential developments on parcels over ten acres in size. The Chapter also provides a mechanism for evaluating whether the program is functioning to achieve a better pattern of development (Appendix 10).

Buffers and Setbacks

One of the most effective methods of protecting water quality in critical areas is to properly manage development immediately adjacent to waterbodies. State and local programs can require buffer zones, leaving undisturbed land to absorb nonpoint source pollution before it reaches the water. For example, depending on the degree of slope, the season, soil types, and the amount and type of vegetation, a 50-foot buffer will help absorb nearly all sediment and associated phosphorous and about 85% of soluble nitrogen found in runoff. Vegetated buffers of this size are also very effective in filtering urban pollutants such as petroleum and pesticides⁸. A buffer can also provide protection from fecal coliform contamination from poorly operating on-site systems.

In heavily developed King County, the Zoning Code requires buffers between the mean high water mark and structures. Developers are required to maintain a 20 foot buffer in urban and rural areas, a 50 foot buffer in a conservancy areas, and a 100 foot buffer in relatively undisturbed areas. Additional buffer requirements can be imposed on construction projects.

In Thurston County, the proposed Critical Area ordinance (Second Working Draft, November 1991) establishes the following Critical Area Buffers:

- | | | |
|---|----------------------------|--|
| ▶ | Landslide Hazard Areas | 25-100 Feet. |
| ▶ | Significant Upland Habitat | Based on Washington Department of Wildlife, Priority Habitat and Species Management Recommendations. |
| ▶ | Streams | 25-100 Feet on both sides. Width is contingent on stream type designation. |
| ▶ | Wetlands | 25-300 Feet. Based on land use intensity and wetland class designation. |

Other examples can be found across the country. The Rhode Island coastal program requires buffers for new development along non-bulkheaded waters. Under its permit program, the Coastal Resources Management Council reviews all proposed development projects within 200 feet of the water. The plan requires a minimum 50 foot setback and requires additional buffers, maintained with natural vegetation, of up to 200 feet adjacent to environmentally sensitive areas. Buffer maintenance is wisely addressed, with provisions for additional requirements for large residential or commercial projects: 1) conservation easements on buffers; 2) commercial lawn care restrictions built into individual lot deeds; 3) access and buffer management plans; 4) restrictive agreements on future activities; 5) public education programs assembled by the developer regarding the site's sensitive areas; and 6) when sewage treatment plant limitations are a concern, new development must follow plant improvements.

The Town of East Hampton, New York has a seven point program to address nonpoint pollution that includes setbacks from waters for structures and septic systems, and land acquisition and conservation easement programs. Also included are street-end redesign to minimize runoff, land clearing and fertilizer-application restrictions, a permit system requiring special review of projects located near identified natural features, water quality monitoring and testing, and improved local enforcement capabilities. All of these practices are included in local zoning and waterfront revitalization programs.

Performance Approaches (Best Management Practices)

Many localities and states impose minimum requirements for project design to reduce the impacts or effects of development. Section IV of this manual discusses site performance approaches. Site performance controls include best management practices (BMPs), such as stormwater discharge standards, buffers and setbacks, impervious surface standards, and open space and vegetation standards. Site controls also include best management practices for construction, for agriculture, and for silviculture.

CRITICAL SHELLFISH AREA RECOMMENDATIONS

Section 6 of the Growth Management Act states that "development regulations" shall be adopted which "preclude land uses...incompatible with critical areas." As stated previously, land use can significantly affect shellfish resources. Therefore, based on the history of recent closures, the results of efforts to restore closed areas, and assessments of threatened areas, the following approaches are recommended in areas affecting shellfish:

- Maximum density should be between 1 dwelling unit per 2 acres and 1 dwelling unit per 5 acres.
- Clustering should be encouraged.
- Agriculture should be allowed provided farm plans are developed, maintained, and implemented.
- A major shift to heavy industrial uses should not be allowed in close proximity to shellfish beds. Existing heavy industrial sites could be allowed to expand provided the industry can demonstrate no increased degradation in water quality. Light industrial is generally acceptable provided the facility and associated activities are compatible with the preservation of sensitive shellfish resources.
- Careful consideration should be given to the siting of industrial, commercial, residential, and other use designations when located near shellfish resources.
- Transfer of Development Rights to a receiving area outside the critical area should be encouraged.
- Buffers and Setbacks should be established through local zoning codes to protect riparian areas.
- Use of best management practices (see Section IV) should be required within watersheds or corridors that feed sensitive shellfish beds.

SECTION IV.

Protecting Water Quality Through Best Management Practices

Nonpoint pollution policies and Best Management Practices (BMPs) are extremely important methods used to protect water quality in critical areas. Incorporating these policies and practices into regular day-to-day land use decisions has been an enormous challenge. Problems associated with their use include: perceived or actual loss of private property rights, loss of land use for money making activities, taxation on land that cannot be used, and the cost of installation of the BMPs.

Local governments have the primary responsibility in implementing nonpoint pollution policies and BMPs. This is most often accomplished through education and local ordinances. Experience has shown that education and voluntary action has not produced sufficient correction to maintain a healthy shellfish industry or to keep up with the addition of new nonpoint pollution sources. Therefore, local governments incorporate into their local ordinances mandates which require the public to reduce nonpoint source pollution which improves water quality.

The following section lists BMPs that can improve nonpoint problems. It is broken down into the following five categories: agriculture, on-site sewage systems, urban stormwater runoff, clearing and grading (erosion), and marinas. Of these five categories, all but agriculture and clearing/grading are routinely regulated by permits. Although some permits exist addressing stormwater, marinas, and on-sites, the standards may not be adequate to protect shellfish.

At the end of this section a list of recommendations is provided related to the use of BMPs in critical shellfish areas.

The BMPs listed in this section are provided for informational purposes. The intention is to provide local planners with ideas on effective tools to include in local ordinances aimed at regional goals and objectives relating to nonpoint source pollution.

NOTE: It is important to remember that BMPs used individually may not solve a nonpoint pollution problem. Therefore, the BMPs listed in this section should be used selectively and collectively as needed to provide a system of BMPs that will adequately protect critical shellfish resources.

Agriculture

Agriculture has been identified as one of the leading contributors to nonpoint source pollution in the State of Washington. Thus, planning to control nonpoint pollution originating from agricultural facilities is an essential component of any program to protect marine waters.

The beneficial uses of shellfish can be protected from agricultural contributions of nonpoint pollution by assigning critical area designation and protection not just to shellfish beds but to the entire watershed which drains to shellfish beds. Within the watershed, development and implementation of farm plans designed to protect water quality and beneficial uses can be required of local farm owners.

Farm plans are documents most often developed jointly by the conservation district, the soil conservation service (SCS), or other qualified organization and the land owner. The farm plan includes a set of actions or BMPs designed to meet a landowner's management objectives for their farm, while protecting natural resources and water quality. To develop a plan, technical personnel from a conservation district or the SCS first assesses such factors as farm size, soil type, slope, and proximity of each site to water. A written assessment is then prepared and presented to the landowner who implements identified BMPs.

The Environmental Protection Agency (EPA) has identified six major categories of agricultural pollution. These are: erosion; confined animal facilities; application of nutrients to cropland; application of pesticides to cropland; grazing; and irrigation⁹.

Appendix 10 is a non-inclusive list of Agriculture BMPs which may aid in the development of ordinances drafted to protect water quality.

On-Site Sewage Systems¹

In the various regions of the Pacific Northwest, significant differences in precipitation, soils, topography, and other factors exist. In many cases, the soil consists of impermeable glacial till, which is ineffective for septic drainfields. Ineffective drainfields degrade water quality and beneficial uses of shellfish.

On-site system placement must be carefully considered from the very beginning, particularly when in proximity to sensitive shellfish growing areas. When on-site sewage treatment and disposal systems (on-site systems) fail, adjacent shellfish bed closures are probable. Failing systems are a major source of bacterial/viral and nutrient inputs in some rural and suburban areas. Protection of critical shellfish resources requires the use of proper on-site design, as well as improved methods of installation, maintenance and repair.

An excellent way to protect shellfish from on-site system failure is to assign critical area designation not just to shellfish beds but to all or part of the watershed which drains to shellfish beds. Within the watershed, stricter standards for siting of disposal systems need to be applied. Alternatively, if watershed conditions allow a less protective approach, county and city authorities could limit the area which requires stricter standards to corridors along tributaries that affect shellfish areas. Once a critical area has been established, siting standards for on-site systems can be regulated through local health codes. Currently, state law requires a three foot vertical separation between the drainfield and ground water. If there isn't 3 feet of separation, alternative systems may be designed that provide the required level of sewage treatment. In critical shellfish areas, close scrutiny should be given to these systems.

Alternative systems are required where existing soil performs poorly as a filter and/or a medium for microbial action and in areas where there is not enough soil. Three alternative systems which are commonly permitted in the State of Washington are briefly described below.

The Pressure Distribution System can enhance the treatment of wastewater effluent. Conventional systems, which allow wastewater to flow by gravity through large diameter pipes, localize distribution in the drainfield. This can lead to overloading the infiltrative surface and clogging soils in some regions and contaminating groundwater in others.

¹It is recommended that local and state health department officials be contacted regarding the information contained in this section or if additional information is needed. The Washington State Department of Health can be reached at (206)586-5846 or SCAN 321-5846.

Pressure distribution systems use pumps or siphons to force liquid into drainfield pipes which more evenly distributes the effluent.

The **Mound** is a drainfield that is raised above the natural soil surface in a specific sand fill material. Within the sand fill is a gravel-filled bed with a network of small diameter pipes. Septic tank effluent is pumped through the pipes in controlled doses to insure uniform distribution throughout the bed. The effluent leaves the pipes under low pressure through small diameter holes, and trickles downward through the gravel and into the sand. Treatment of the effluent occurs as it moves through the sand and into the natural soil.

Every new mound is required to have a designated replacement area. This area is similar to the size of your existing mound. It must be maintained should that the existing system need an addition or repair.

The **Sand Filter** is a concrete or PVC-lined box filled with a specific sand material. A network of small diameter pipes is placed in a gravel-filled bed on top of the sand. The septic tank effluent is pumped under low pressure through the pipes in controlled doses to insure uniform distribution. The effluent leaves the pipes, trickles downward through the gravel, and is treated as it moves through the sand. A gravel underdrain collects and moves the treated wastewater to either a second pump chamber for discharge to a pressure distribution drainfield or to a gravity flow drainfield. The second pump chamber may be located in the sand filter.

Although on-site system management can occur through growth management activities to protect critical areas, historically this has occurred through the implementation of state and local health codes.

State health regulations regarding on-site sewage treatment and disposal are codified in Chapter 246-272. This regulation requires that local boards of health adopt this chapter, or develop local rules and regulations for on-site sewage treatment and disposal that are consistent with, and at least as stringent as the state board of health regulations (Table 6). While WAC 246-272 does not specifically call for more stringent on-site regulations in sensitive regions, such as shellfish growing areas, it does allow for local jurisdictions to do this. This has already been done in some Puget Sound watersheds. Both Thurston County Health Department and the Tacoma-Pierce County Health Department have adopted more stringent on-site regulations in particular shellfish growing areas (Appendix 1).

TABLE 6 On-site systems: regulatory responsibilities.

The regulation of on-site systems is based on the size of each system and the amount of wastewater it can handle.

→	Discharges from large septic systems designed to treat more than 14,500 gallons per day (slightly greater than the discharge from 40 average-sized homes) are regulated by the Department of Ecology under Chapter 173-240-020(5)WAC, which controls wastewater facilities in the state.
→	Industrial on-site systems of any size and systems using mechanical treatment or lagoons to handle over 3,500 gallons per day (discharge from around 10 average homes) are also subject to approval by Ecology.
→	Systems treating between 3,500 and 14,500 gallons per day (the discharge from nine to forty average homes) are regulated by the Department of Social and Health Services under Chapter 246-272 WAC.
→	Local health agencies regulate septic systems with a flow of less than 3,500 gallons per day under Chapter 246-272 WAC. However, several local health departments currently regulate flows of 3,500 to 14,500 gallons per day under contract with DOH.

Source: *MANAGING NONPOINT POLLUTION: An Action Plan Handbook for Puget Sound Watersheds*, PSWQA, June 1989

Within these sensitive areas a number of requirements can be made for new construction, as well as corrective measures for existing development. Some of these include: additional location, design, and/or performance standards for on-site systems; larger land areas for new development; prohibition of development; additional operation, maintenance, and monitoring of system performance; requirements to upgrade existing systems; requirements to abandon certain existing systems; and monitoring of ground and surface water quality.

State on-site regulations are currently in the process of being up-dated. The proposed regulations call for the development of more stringent regulations in regions designated as "areas of special concern". Under the new regulations, areas near or tributary to shellfish growing are considered as areas of special concern.

Designating watersheds or corridors as critical areas within which special standards apply produce the same result as is proposed in the new on-site regulations. Under SEPA, "sensitive areas" can be declared which also allows special standards to be applied. Until the draft state health code is finalized, the process of designating and protecting critical areas under the Growth Management Act is perhaps the best way to institute good protective measures for shellfish.

GMA ordinances should be coordinated with, and standards embodied in, local health codes. Therefore, local health agencies should be invited to participate in planning for the control of nonpoint pollution from on-site systems.

On-Site Examples

Currently, through Thurston County's Article IV (Rules and Regulations of the Thurston County Board of Health Governing Disposal of Sewage--Appendix 2), homeowners are required to obtain a **Operational Permit** "to ensure the proper operation and maintenance of certain on-site sewage disposal systems..." Under the Thurston County ordinance, "operational permits shall be required for all subsurface disposal systems permitted after the effective date of [the] regulation. Operational permits shall also be required for existing systems at time of sale of property, when systems are repaired, or expanded or when required of specific areas as contained in the conditions of a Geologically Sensitive Area (See Appendix 2 for further detail).

Additional steps can be taken to protect shellfish resources in the State of Washington.

- ☐ Mandate annual education and testing of on-site system installers.
- ☐ Provide regular inspection and enforcement action on on-site systems by local authorities.
- ☐ Develop publicly operated and/or funded inspection and maintenance services.

Further examples can be found in programs across the country. The following is an example of a coastal program in Rhode Island where local governments and homeowners are working together to solve nonpoint problems:

State legislation encouraged the creation of special management districts for non-sewered areas. As of April 1990, four districts had been created which have an inspection system requiring mandatory pumping every three years and the authority to make corrections.

Grants were awarded to the towns of Charleston and South Kingstown to survey septic systems that were suspected of failing near sensitive areas. A brochure (funded through a grant from the state Coastal Zone Management program) on the care of on-site systems was mailed to property owners with tax bills. As an outcome of this program, South Kingstown established a tax rebate program as an incentive for annual pump-outs.

Also in Rhode Island, upgrading of inadequate systems is a condition for rehabilitation or enlargement permits of over 150 square feet (also required in Washington for any remodel).

An address and telephone number for the Rhode Island Coastal Resource Management Council can be found in the References at the back of this document.

Urban Stormwater Runoff

For additional information, please consult the Department of Ecology's Stormwater Management Manual For The Puget Sound Basin(SM). DRAFT June 1990.

In the urban environment, an increase in impervious surfaces and an decrease in natural vegetation result in increased quantity and velocity of runoff; streambanks erode more rapidly, greater amounts of sediments are carried by the increased runoff, and the threat of flood and water quality degradation increases.

Urbanized areas also experience pollutant loadings many times greater than that of land in a pre-development state. The primary pollutants found in urban runoff are sediment, oxygen demanding substances, nutrients, heavy metals, bacteria and pathogens, oil and grease, and pesticides.

Stormwater treatment systems are necessarily site-specific. The contributing drainage, infiltration characteristics of the soil, site topography and other factors determine their effectiveness, which can be highly variable.

The following is a list of Best Management Practices (BMPs) that are available as tools to improve water quality in urban areas:

1 Source Control

Source control is the most important and cost effective kind of management practice. To achieve this, the general public must recognize the effect of their day-to-day activities on water quality. Educational campaigns can be used to effectively accomplish this.

2 Pond Systems (Detention/Retention)

Detention Devices: Runoff is temporarily stored, then discharged, generally at a lower rate, into a surface water. Pollution reduction results from the settling of pollutants during the detention period.

Retention Devices: Runoff is permanently stored so that it is never discharged directly to surface waters. Wetlands may often be constructed in such devices to help filter out sediment and to promote nutrient heavy metal uptake.

3 Biofiltration

These biologically based controls, use vegetation to remove pollutants by filtration, biological uptake(minimal), or trapping sediment. Often these components are part of infiltration systems which not only removes pollutants but also recharges the groundwater. Biofiltration facilities may be used by themselves or in line with other stormwater treatment systems.

4 Infiltration Devices

Infiltration devices are used for removing the soluble and fine particulate pollutants found in stormwater runoff (see retention).

The practices listed above are the primary means of controlling the majority of pollutants in urban stormwater runoff.

Runoff in Developing Areas

For additional information, please consult the Department of Ecology's Stormwater Management Manual For The Puget Sound Basin(SM). DRAFT June 1990.

The first and best opportunity to protect water from an increase in nonpoint pollution occurs *prior* to development. Pre-development protection can be provided through the adoption of environmentally-sensitive ordinances (EPA, 1991). Protection is provided when a development ordinance is adopted by a city or county (an inter-local agreement may be needed), and administrated and enforced by a single authority within the community. Practices available for incorporation into protective ordinances include:

1. District Classification System (see use descriptions in section III)

District classification systems can be used to direct heavy development away from sensitive areas and ensure permitted development is limited in a manner that preserves water quality.

2. Environmental Reserves

Environmental reserves include but are not limited to the establishment of a comprehensive buffer system for sensitive area protection. Adequate buffers can greatly reduce impacts

commonly associated with coastal nonpoint pollution. The following buffers and development restrictions are **useful tools** to help local planners maintain critical areas.

NOTE: Buffer definitions, except for "Wetland Buffers," are taken from EPA's Proposed Guidance Specifying Management Measures For Sources of Nonpoint Pollution in Coastal Waters. Wetland buffers are taken from the Washington State Department of Ecology "Model Wetlands Protection Ordinance".

"Stream Buffers" - A stream buffer is a variable-width strip of [naturally] vegetated land for protection of water quality, aquatic and terrestrial habitats. Development should not be allowed within a variable-width buffer strip on each side of an ephemeral [or] perennial stream channel. Minimum widths for buffer strips of 50 feet for low-order headwater streams and 200 feet or more for larger streams [and rivers], are recommended. [Site specific decisions as to proper buffer width would require analysis of slope, soils, type and quantity of vegetation and precipitation rates and levels.] Stream buffers should be expanded to include floodplains, wetlands, steep slope areas, and open space to form a contiguous system."

"Wetland Buffers" - No habitat-disturbing activities should occur within tidal or non-tidal wetlands and the perimeter buffer area. A 25-300 foot buffer is recommended depending on the category of wetland. The ranges for each category are:

- | | |
|-------------------|------------------|
| 1. 200 - 300 feet | 3. 50 - 100 feet |
| 2. 100 - 200 feet | 4. 25 - 50 feet |

"Coastal Buffers" - A coastal buffer is a variable width strip of [naturally] vegetated land preserved from development activity to protect water quality, aquatic and terrestrial habitats. A 100 foot minimum buffer of natural vegetation landward from the mean high tide line is recommended to remove or reduce sediment, nutrients, and toxic substances from entering coastal waters."

"Expanded Buffers" - Buffers should be expanded to include contiguous sensitive coastal areas which, if developed or disturbed, may impact streams, wetlands, or other aquatic environments. Expansion of buffers is a good practice

whenever new land development or other disruptive activities occur."

NOTE: A description of existing buffer programs in other states can be found in Section III.

3. Site Design

Two effective tools in site design are cluster and fingerprint development. Both can minimize impervious surfaces in developed areas and improve the effectiveness of runoff conveyance and treatment.

Clustering concentrates development to a limited area of a given site, leaving large portions of land undisturbed. By concentrating development, natural filtration is encouraged and more effective stormwater handling and treatment facilities can be constructed.

Site Fingerprinting disturbs only those areas which will be used for structures, roads, and rights-of-way which will exist following construction.

4. Miscellaneous

Many other effective practices exist for use in controlling urban runoff and protecting water quality downstream. A few of these are listed below:

Floodplain Restrictions - Limiting development to areas outside the 100 year floodplain will preserve established river and streamside buffers and can greatly reduce property damage related to flood episodes.

Steep Slope Limitations - Erosion and increased sediment loading can be reduced by restricting or eliminating development on steep slopes. Clearing and grading should not occur on slopes in excess of 25% (EPA, 1991).

Offsets - These are structures or actions designed to reduce impacts and/or compensate for undesirable consequences of development. Examples would be reduction of road or sidewalk widths and the use of porous or gritted material in construction of roads or sidewalks.

Forest Preservation - In addition to being aesthetically pleasing, forests provide important functions such as wildlife habitat and a runoff filtering mechanism. "Tree-Save" areas could be designated to preserve large blocks of forest land instead of small isolated stands. These areas should be linked to buffer strips if possible to provide corridors for wildlife, as well as providing additional protection for surface waters.

Clearing and Grading (Erosion Control):

For additional information, please consult the Department of Ecology's Stormwater Management Manual For The Puget Sound Basin(SM). DRAFT June 1990.

Many types of pollution are generated by clearing and grading activities, particularly sediment. Sediment loadings from construction sites can be 100 times greater than those from agricultural lands and as much as 2,000 times greater than from undisturbed forest land. Other significant pollutants associated with clearing and grading are particulate organic matter, toxic metals, petroleum, and hydrocarbons (originating from on-site equipment), and nutrients (applied for revegetation and stabilization). A few contemporary methods of erosion and sediment control follow.

1. Prohibition of major development activities during winter months.
2. Topography, soils, slope and natural vegetation are prime considerations in development plan.
3. Avoidance of clearing and grading of large portions of land at the same time.
4. Cover for the raw ground, whether impervious or vegetative, is installed as soon as possible after clearing.
5. Grading techniques which impede vertical runoff and maximize infiltration on-site are utilized.
6. Erosion and sediment control plans specify details of the practices to be employed on-site.
7. Access roads do not exceed 10% grade.
8. Perimeters of the development area and any vegetation to be preserved within the cleared area should be clearly marked with signs or tape to ensure preservation.

Although erosion and sediment control practices should be employed on all construction sites, additional protection needs to be considered for proposals for critical watersheds. A few practices that can achieve the additional protection are (most of these practices are required for all new development in the SMM):

1. Minimal clearing;
2. Phased clearing operations to minimize impact;
3. A mandatory 72-hour stabilization period following a disturbance;
4. Establishing or protecting buffers along rivers, streams, coastal zones;
5. Correct installation of silt fencing;
6. Installation of oversized sediment traps and basins;
7. Immediate installation of infiltration devices with provisions to maintain these devices until the area has been permanently stabilized;
8. Innovative scheduling of paving vs vegetative stabilization;
9. Inspecting and maintaining all controls following storm events; and,
10. Decreasing intervals between county inspections.

The Stormwater Management Manual For The Puget Sound Basin (SMM)

A primary purpose of the SMM is to identify the minimum requirements and provide guidance on how to prepare and implement stormwater management plans, including erosion and sediment control plans. These plans are required for new development and redevelopment on both large subdivisions, and small parcels, and must meet all of the applicable minimum requirements contained in Chapter I-2 of the SM. These requirements are, in turn, satisfied by the application of BMPs. In doing so the plans will address the impacts of new development and redevelopment on stormwater runoff, and to the maximum extent practicable, mitigate deleterious effects.

A second important purpose of the manual is to provide information for users who are retrofitting BMPs to existing development. Retrofitting will primarily occur when a local government or Ecology has detected a stormwater drainage problem emanating from existing development and, as a result, has directed the implementation of BMPs to correct the problem.

A third purpose is to provide a reference source for users who wish to prepare technical bulletins, leaflets, etc. for purposes of education and/or specialized BMP implementation. Examples would include technical leaflets for individual homeowners, local governments, homeowners' associations, and business operators.

Marinas

Proper design, siting, construction, and operation of marinas can reduce nonpoint source impacts to the marine environment, as well as benefit the general public. Denying opportunities for marina development is inconsistent with the state's policy on water-dependent uses (see Shoreline Management Section) and does not necessarily prevent NPS problems. Local government oversight and regulatory control can greatly reduce NPS pollution from marinas.

Nonpoint pollution from marinas and recreational boating often produce negative environmental effects to the nearby water column and benthic resources. A few of these impacts are listed below.

- Toxicity in the water column related to decreased levels of dissolved oxygen and elevated levels of metals and petroleum products.
- Increased levels of metals and organic chemicals in the tissues of organisms such as algae, oysters, mussels or other filter feeders.
- Increased levels of pollutants in sediments resulting in avoidance of the area by benthic organisms.
- Levels of bacterial contamination that result in shellfish bed or swimming area closure.
- Bottom disruption during dredging and positioning of pilings may destroy habitat, re-suspend bottom sediment (which releases toxic substances found in the sediments), and increase turbidity, effecting photosynthetic activity in the area.

Siting

The most important step in controlling the impacts of NPS pollution is appropriate marina siting. The following is a list of management guidelines which can be applied when siting marinas (NOTE: These policies should be included in the Shoreline Master Program):

1. **Site marinas away from shellfish resources, sensitive submerged aquatic vegetation, wetlands, and other critical habitat areas.** A buffer zone should be established around critical habitats located near the proposed marina. The size of the buffer zone should be considered on a case by case basis due to variation in requirements between resource maintenance.

2. Site marinas in areas where tides and currents are adequate to flush the site and renew inlet water regularly. Avoid disrupting currents with piers or structures. Marina construction should not be allowed if water quality standards will be violated and biological resources dependant on clean water are degraded.
3. Site marinas adjacent to deep water to avoid or reduce dredging. The area to be dredged should be no deeper than needed for the marina itself, including fairways, channels, docking areas, and maneuvering areas. Under no circumstances should dredging result in deeper water than the adjacent open water.
4. Site marinas in areas currently permitted for disposal of dredged materials to limit the number of disturbed areas. The designation of a new dredge disposal site should not be required.
5. Locate piers away from submerged aquatic vegetation so that shading does not occur.
6. Site marinas in areas with existing services such as roads, utilities, public sewers, and water lines to eliminate the impacts associated with service installation.
7. Site marinas away from surface or ground water that is used for a drinking water supply.
8. Site marinas in areas that take advantage of natural physical characteristics to minimize dredging and shoreline fill and excavation.

Design

In addition to siting, a proper design must be utilized to minimize NPS impacts. The following is a short list of components that may be included in marina design plans:

1. Shoreline protection
2. Navigation and access channels
3. Wastewater facilities
4. Stormwater management

5. Dry boat storage
6. Discrete boat maintenance areas
7. Fuel storage and delivery facilities
8. Piers and dock systems
9. Accessible pump-out facilities
10. Vehicle/trailer parking

Operation

The operation and maintenance of a marina and associated boating produces concerns such as disposal of fish wastes and the use of chemicals which have the potential to harm water quality.

Many of the wastes generated in boat yards and marinas should not be discharged into sanitary sewers or storm drains. Although there are some exceptions, most indoor drains go to sanitary sewers and most outside drains go to natural water bodies. Improperly disposed of waste causes water pollution, damages or impairs treatment facilities and can be unhealthy for workers. Contaminants of concern include: antifreeze, oils, detergents, wash water from cleaning floors and decks, and paint dust.

Many things can be done to ensure water quality is preserved in day-to-day operation of marinas and boats.

1. Gradual recycling of fish wastes.
2. Use of tarps and vacuums to prevent hazardous solids or liquids from boat cleaning and repair from entering adjacent waters.
3. Use of oil water separators on all outside drains.
4. Placement of berms or other barriers around hazardous material sites to prevent spillage from reaching surrounding water bodies.
5. Collection and recycling of antifreeze and petroleum products.
6. Use of oil absorption pads in the bilge areas of all boats. These pads should be changed as needed or at least once a year. In

addition, provisions for appropriate disposal of absorption pads should be available.

7. Use of phosphate-free and biodegradable detergents only for boat washing.

Local Review of Marina Developments

Local authorities are in the best position for comprehensive review of a marina proposals and their effects. This review can be made following the submission of a detailed summary of the proposed project. Suggestions for components of this project summary are:

1. A description of the proposed project (construction drawings, dredging and sediment disposal plans, siting justification, and a demonstration that there is public demand for the facility).
2. A description of the existing environment (soil characterization, hydrology, existing water quality, aquatic and terrestrial ecosystems, historical and archeological sites, the local economy and land uses, and an evaluation of available public facilities).
3. An environmental impact assessment (a review of pollution loadings from stormwater runoff, and direct boat discharges in the context of state water standards, and impacts on soils and nearby shellfish resources).
4. An evaluation of the measures taken to mitigate the effects described in the environmental impact assessment.
5. A summary of the adverse effects and the beneficial impacts on water quality, ecosystems, local economy, public infrastructure, historical sites, and aesthetic values.
6. A marina operations and maintenance plan.

This information will provide local planners with needed information to verify the proposed project is consistent with regional and state coastal zone and growth management mandates.

CRITICAL SHELLFISH AREA RECOMMENDATIONS

As stated at the beginning of this section, critical area protection is mandated by the Growth Management Act, but methods of accomplishing this protection are not. Therefore, suggestions for achieving this protection are as follows:

- Local regulations should provide incentives for or directly require the creation, maintenance, and implementation of farms plans. Individual BMPs can be identified and adapted on a site specific basis and updated annually.
- Mandate riparian buffers that protect stream corridors for all development. For agricultural development, require that all buffers be fenced.
- Stricter on-site sewage standards should be adopted when located within a critical shellfish watershed. At a minimum, strict standards should be applied along a 1000 foot corridor (from ordinary high water). Specific requirements should be based on soil type in the area and determined by local health authorities.
- A mandatory inspection and pump-out schedule for on-site systems within a critical watersheds is desirable.
- On-site designers and installers should be required to obtain a license from the county to start or continue on-site activities.
- Require all proposed marina developments to demonstrate the level of impact on shellfish beds in the area. Developments should not be allowed to cause degradation of any existing or potential harvesting area (commercial or recreational).
- Adopt policies which require "zero increase" in stormwater runoff and institute stormwater runoff retention regulations.

SECTION V.

Funding

Shellfish Protection Districts

It is important to acknowledge that existing funding sources are often not adequate to address many of the nonpoint pollution problems that exist today. One method of providing additional funds for use at the local level is through taxation of local residents. The 52nd Legislature(1992 regular session) passed ESHB 2363 which enables counties to finance shellfish protection programs through county tax revenues, inspection fees for services performed, charges or rates specified in its protection program, grants, or revenue bonds, general obligation bonds, or other evidences of indebtedness. Fees and charges under the program may not be assessed to confined animal feeding operations or other facilities permitted and assessed fees under the National Pollution Discharge Elimination System, or lands classified as forest land under Chapter 84.33 RCW or timberland under Chapter 84.34 RCW.

Counties that form shellfish protection districts will receive high priority for financial assistance to implement protection programs, including grants and loans from water pollution control revolving fund, water quality account, and referendum 39 (waste disposal facilities).

Grants / Loans

There is a significant variety of funding sources to tackle nonpoint problems that effect shellfish beds. The following summarizes of the primary sources available:

- ✓ Washington State Revolving Fund (SRF) low interest loans to local government to finance a broad assortment of water pollution projects. Eighty percent of the total fund is earmarked for planning, design, and construction of water pollution control facilities. Ten percent is allocated for **nonpoint source pollution** projects such as installing fencing to keep livestock from polluting streams and eroding streambanks, monitoring and restoring lakes, rivers, and streams, and rehabilitating septic systems(through a county's formation of its own revolving loan fund). The remaining ten percent can go to conservation and management projects for federally-designated estuaries like Puget Sound.

- ✓ In 1986 the legislature created the Centennial Clean Water Fund (CCWF) to promote pollution control activities which restore or improve water quality and prevent further degradation of state waters. The CCWF is used to supply grants to cities, counties, tribes, or special districts for various water quality projects including **nonpoint pollution**. Through 1995, there is expected to be approximately \$45 (approx. 53 million in 1992) million dollars available annually in five categories:

- Marine Water Facilities (50% of the annual fund)
- Ground Water Facilities and Activities (20%)
- Freshwater Lakes and Rivers (10%)
- Nonpoint Pollution Facilities and Activities (10%)
- Discretionary Projects (10%)

→ **IMPORTANT:** The legislature can increase or decrease the appropriated amount available for CCWF projects.

- ✓ The Public Involvement and Education (PIE) Fund is one of the educational strategies of the *1991 Puget Sound Water Quality Management Plan*. It is intended "to increase understanding of Puget Sound and its resources and the effect of human activities on them, and to facilitate public involvement in decisions to clean up and protect the Sound."

PIE is not a grant program. It is a program in which the Authority obtains the services of individuals and organizations through personal service contracts. PIE Fund contractors, through their programs, act on behalf of the Authority and the Puget Sound Water Quality Management Plan.

Since 1987, the Washington State Legislature has appropriated about \$1 million each biennium from the Centennial Clean Water Fund for this model projects program. Between 1987 and 1990 over 100 projects were carried out.

Financial Assistance Telephone Numbers

Additional information on funding can be obtained by contacting the Water Quality Financial Assistance Program of the Department of Ecology at:

- 205(j) Water Quality Management Planning Grants: 438-7720
- State Revolving Fund (SRF): 438-7720
- Coastal Zone Management: 459-6780
- Second Number 459-6781
- Lake Restoration: 459-6067
- Aquatic Plant Management: 459-6067
- Agricultural Water Supply: 459-6119
- Flood Control Assistance: 459-7569
- Waste Management Grants: 459-7474
- Groundwater Management Areas: 459-6120

Note: All telephone numbers are area code 206 or scan 585.

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³Walter, Michael F., 1979, *Nonpoint Source Pollution Control by Soil and Water Conservation Practices*, American Society of Agricultural Engineers, 0001-2351/79/2204-08734 pp. 834-840.

⁴*Effectiveness of Soil and Water Conservation Practices for Pollution Control*, US EPA, 1979.

⁵DRAFT--*Transfer of Development Rights Programs: A Guide To Protecting Resource Lands*, Section written by Cathy Baker, Department of Community Development, December 18, 1991.

⁶Canning, Douglas J. 1988, *Urban Runoff Water Quality: Effects and Management Options*, Washington Department of Ecology.

⁷Gary P. Richards, 1985, *Outbreaks of Shellfish-Associated Enteric Virus Illness in the United States: Requisite for development of viral guidelines*, *Journal of Food Protection*, v.48, n.9.

⁸EPA-News Notes #18--*Forestry Project Assists In Improving Water Quality In The Monocacy River Watershed*, January-February 1992.

⁹*Proposed Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters*, US EPA, May 1991.

STATES WITH PROGRAMS REFERRED TO IN THIS MANUAL

Washington

Department of Ecology
Coastal Zone Management
Mail Stop PV-11
Olympia, WA 98504
(206)459-6777

Maine

State Planning Office
State House Station #38
Augusta, ME 04333
(207) 289-3261

Maryland

Coastal Resources Division
Department of Natural Resources
Tawes State Office Building
Annapolis, MD 21401
(301) 974-2784

New Jersey

Department of Environmental
Protection, CN 401
Trenton, NJ 08625
(609) 292-2795

New York

Department of State
162 Washington Street
Albany, NY 12231
(518) 474-3643

North Carolina

Division of Coastal Management
Department of Environment, Health,
and Natural Resources
512 North Salisbury Street
Raleigh, NC 27611
(919) 733-2293

Oregon

Department of Land
Conservation
and Development
1175 Court Street, N.E.
Salem, OR 97310
(503) 378-4017

Rhode Island

Coastal Resource Management
Council
Stedman Office Building
Tower Hill Road
Wakefield, RI 02879
(401) 277-2476

Wisconsin

Coastal Management Program
Department of Administration
101 South Webster, 6th Floor
Madison, WI 53707
(608) 266-3687

Appendix 1



APPENDIX B

SPECIAL ON-SITE WASTE STANDARDS FOR COMMERCIAL SHELLFISH GROWING AREAS

I. Definitions:

1. Mound-Fill Systems:

Those systems described in the W.D.S.H.S. "Design and Construction Manual for Fill or Mound Systems in the State of Washington", May, 1981, or subsequent editions.

2. Pressure Distribution Systems:

Those systems described in the W.D.S.H.S. "Draft Guidelines for the use of Pressure Distribution Systems", October 1981, or subsequent editions.

3. Director of Health:

The Director of Health of the Tacoma-Pierce County Health Department or his duly authorized representative.

4. Department:

The Tacoma-Pierce County Health Department.

II. Applicability:

1. These standards shall apply to all lots, parcels and tracts within the identified drainage basins of Burley Lagoon, Minter Bay, Rock Bay, and Filucy Bay, previously designated as the Sensitive Area.

2. In the areas of applicability these standards shall take precedence over the provisions of the Revised Code of Washington, the Washington Administrative Code, and the Tacoma-Pierce County Health Department standards. The provisions of the Revised Code of Washington, the Washington Administrative Code, and the Tacoma-Pierce County Health Department shall continue in full force and effect except when in conflict with these standards.

3. Subdivision lots recorded prior to the effective date of these standards and approved by the Director of Health shall not be subject to the minimum lot sizes required by these standards, however, a minimum three foot separation must be maintained between the drainfield trench bottom and any impervious material or high seasonal water table. Said lots must also meet any additional

setback requirements or enhanced treatment requirements required in these standards.

III. Minimum Lot Size:

1. Lot sizes required for specific site conditions shall be determined by the following table:

TABLE I

Soil parameters	S O I L T Y P E	Method of Distribution	
		Gravity	Pressure
		System	System
		Lot Size	Lot Size
Separation of more than 36"	1	Unacceptable	1 acre
	2	18,000 sq ft.	12,500 sq ft.
	3	18,000 sq ft.	15,000 sq ft.
Total Soil Dept More than 48"	4	18,000 sq ft.	18,000 sq ft.
	5	22,000 sq ft.	22,000 sq ft.
	6	Unacceptable	Unacceptable
Separation of 25"-36"	1	Unacceptable	2.0 acres
	2	5 Acres*	30,000 sq ft.
	3	1 acre	30,000 sq ft.
Total Soil Dept 37"-48"	4	1 acre	30,000 sq ft.
	5	1 acre	1 acre
	6	Unacceptable	Unacceptable
Separation of 12"-24"	1	Unacceptable	2.0 acres
	2	5 Acres*	30,000 sq ft.
	3	1 acre	30,000 sq ft.
Total Soil Dept 24"-36"	4	2.5 acres	1.0 acres
	5	2.5 acres	1.0 acres
	6	Unacceptable	Unacceptable

*May be reduced to 2.5 acres if setbacks from surface waters are increased to 150 feet. Setbacks from cut-banks must be increased to twice the normal distance to a maximum of 150 feet.

Soil Classes

Soil Classes:	USDA TEXTURE:	SCS SERIES IN SENSITIVE AREA:
I.	Gravels, Coarse Sands	Nielton
II.	Medium Sand	Indianola, Ragnar (uncommon)
III.	Fine Sand, Loamy Sand	Indianola, Ragnar (common)
IV.	Sandy Loam, Loam	Harstine, Alderwood
V.	Loam, Silt Loam	Kitsap, Kapowsin
VI.	Silt Clay Loams, Silt Clays	Kitsap, Bow Bellingham

2. All lot sizes are based on 3 bedroom residences. If more than 3 bedrooms are proposed for a new residence, then the lot size requirement increases by the following formula:

$$A = 1/3L \times B$$

Where A = Adjusted lot size, L = Minimum 3 bedroom lot size established in Table I, and B = Total number of proposed bedrooms.

3. Reduction of lot size to less than the established three bedroom minimum lot size will not be considered for any reason, including proposals for residences with less than three bedrooms.

IV. Multi-family Lot Sizes:

1. Multi-family lot sizes shall be determined by the following formula:

$$M = 1/3L \times B$$

Where L = Minimum singles family lot size for a single-family residence based on environmental conditions and method of treatment proposed. B = The number of bedrooms proposed at a rate of no less than 2 bedrooms per unit and M = Minimum multi-family lots size required.

V. Commercial Lot Sizes:

1. Commercial lot sizes shall be determined by the following formula:

$$C = L \times Q / 450$$

Where L = Minimum single-family lot size for a single-family residence based on environmental conditions and method of treatment proposed. Q = Anticipated daily waste flow and C = Minimum commercial lot size.

2. In no case shall C be less than L.

VI. Mobile Home Parks- Pad Sizes:

1. Pad sizes and densities for mobile home parks shall be determined by the same method as for single-family lot sizes found in Section III of this standard.

VII. Setbacks:

1. Except where otherwise modified in these standards, all setbacks for on-site waste disposal systems shall be equivalent to those found in WAC 248-96-100.

VIII. Low Water Use Fixtures:

1. While the department encourages the use of low water use fixtures, no reduction of lot size will be allowed by use of any such fixtures.

IX. Soil Tests:

1. Percolation tests, sieve analysis and bulk density determinations may be required if, in the opinion of the Director of Health, they are necessary for proper soil evaluation. All soil tests must be performed in a method acceptable to the Health Officer.

X. Mound-Fill Systems:

1. Lot sizes where mound-fill systems are proposed shall be determined by the following table:

TABLE II

Soil Type*	24" Fill from Bed Bottom to Native Soil	12" Fill from Bed Bottom Native Soil
1	1/2 acre	Unacceptable
2	18,000 sq ft.	18,000 sq ft.
3	18,000 sq ft.	18,000 sq ft.
4	18,000 sq ft.	18,000 sq ft.
5.	18,000 sq ft.	18,000 sq ft.
6.	Unacceptable	Unacceptable

* For explanation of soil type see Section III

2. Where proposed, the soil depth and quality requirements for mound-fill systems shall be equivalent to those found in the W.D.S.H.S. "Design and Construction Manual for Fill or Mound Systems in the State of Washington", May 1981 or subsequent editions.

XI. 5 Acre Tracts:

1. Soil requirements for Tracts of 1/128th of a Section or more may be reduced by the Director of Health provided that:
 - a. A restriction is placed on the property deed preventing further subdivision or development.
 - b. The proposal is for an owner-occupied single-family residence.
 - c. There are no existing residential, commercial, industrial, or institutional structures on the property.
 - d. The subsurface absorption system is located no closer than 100 feet from any property lines.
 - e. Slopes of the native ground surface in the drain-field area do not exceed 12%.
 - f. Setbacks from any perennial surface water bodies are no less than 300 feet.
 - g. Setbacks from any seasonal surface water bodies shall be 100 feet.

h. Setbacks from cut-backs are double those outlined in WAC 248-96-100 up to a maximum of 200 feet.

i. A minimum 6 inch separation can be maintained between the trench bottom and the highest seasonal water table or any impervious layer.

j. Soils in the drainfield area must be of Classes 2-5 as identified in Section III.

XII. Reserve Drainfield Area:

A 100% reserve drainfield area shall be required for all systems installed under this standard. Said reserve area shall be subject to all requirements found in this standard.

XIII. Enforcement of Penalties:

These standards shall be enforced by the Director of Health pursuant to his authority under Pierce County Code, Section 20.16.080 and RCW 70.05.070. Any violation of these standards shall be punishable in accordance with Pierce County Code, Section 20.16. In addition, because of the fragile nature of the commercial shellfish growing areas, and because of the devastating effect that failing septic systems have on said areas, the Board of Health hereby specifically finds that any violation of these standards is a public nuisance and may be abated by the Director of Health through a nuisance action filed in the Superior Court of the State of Washington for Pierce County.

XIV. Severability:

Should any word, sentence, or portion of this standard be declared unconstitutional or invalid for any reason, the remainder of this standard shall not be affected thereby.

XV. Evaluation and Revision:

This standard shall be reviewed and evaluated as deemed necessary by the Director of Health. Revision shall be made as needed to insure proper administration and to allow for newer methods of on-site sewage disposal.

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II. 2. In the areas of applicability these standards shall take precedence over the provisions of the Revised Code of Washington, the Washington Administrative Code, and the Tacoma-Pierce County Health Department standards. The provisions of the Revised Code of Washington, the Washington Administrative Code, and the Tacoma-Pierce County Health Department shall continue in full force and effect except when in conflict with these standards.

~~XI.1—5 Acre Tracts~~

~~1. Soil requirements for Tracts of 1/128th of a section or more may be reduced by the Director of Health provided that:~~

- ~~a. A restriction is placed on the property deed preventing further subdivision or development.~~
- ~~b. The proposal is for an owner occupied single family residence.~~
- ~~c. There are no existing residential, commercial, industrial, or institutional structures on the property.~~
- ~~d. The subsurface absorption system is located no closer than 100 feet from any property lines.~~
- ~~e. Slopes of the native ground surface in the drainfield area do not exceed 12%.~~
- ~~f. Setbacks from any perennial surface water bodies and no less than 300 feet.~~
- ~~g. Setbacks from any seasonal surface water bodies shall be 100 feet.~~
- ~~h. Setbacks from cut banks are double those outlined in WAC 248-96-100 up to a maximum of 300 feet.~~
- ~~i. A minimum 6 inch separation can be maintained between the trench bottom and the highest seasonal water table or any impervious layer.~~
- ~~j. Soils in the drainfield area must be of Classes 8-9 as identified in Section III.~~

Appendix 2



10.5.3 Plan Submission. The health officer may require submission of a plan by a licensed sewage system installer/planner if conditions of the repair site warrant.

10.5.4 Repair of Community and Larger Systems. A sewage system design shall be submitted for review prior to issuance of the repair permit. The health officer may waive this requirement or design submission for minor repairs.

10.5.5 Expiration of Repair Permit. A Repair Permit shall expire if work on the repair is not started within six calendar months from the date of application. If the Repair Permit expires, work on the repair may not be started until a new Repair Permit is obtained. If it has been a year or less since the expiration of the permit, the new permit fee shall be a reduced amount, as per Article 1; otherwise the full Repair Permit fee shall be paid.

10.6 Operational Permit. An Operational Permit is required to ensure the proper operation and maintenance of certain on-site sewage disposal systems as identified in this Code. Prior to the issuance of a Sewage Disposal System Construction Permit, an applicant shall obtain an Operational Permit when required.

Operational permits shall be required for all subsurface disposal systems permitted after the effective date of this regulation. Operational permits shall also be required for existing systems at time of sale of property, when systems are repaired, or expanded or when required of specific areas as contained in the conditions of a Geologically Sensitive Area.

10.6.1 Operational Permit Required. An Operational permit may be required by the health officer for systems initially approved by the Department of Ecology that are not operated under a current NPDES or Washington State Discharge permit.

The health officer shall apply conditions to the Operational Permit as are reasonable and necessary for the safe and sanitary operation of the sewage system.

10.6.2 Renewal of Operational Permit. The health officer shall grant renewal of the Operational Permit when he finds compliance with the conditions of the permit.

10.6.3 Operational Permit, Time Period for Renewal. The health officer shall establish a renewal period for Operational Permits. The permit period shall be from one (1) to five (5) years and shall be related to the need for operation, maintenance and inspection.

10.6.4 Covenant Required. A covenant showing the existence of the Operational Permit shall be recorded by the applicant with the Thurston County Auditor on a form approved by the health officer.

10.6.5 Transfer of Permit. The Operational Permit shall run with the land and shall be considered to be valid under the original terms of the permit during and after transfer of ownership of property. The permit holder shall notify the health officer of the transfer and provide a current mailing address.

10.6.6 Violation. Failure to perform the conditions and requirements of the Operational Permit during the performance of the permit shall be a violation of this Code as per Article 1.

10.6.7 Fee Required. A fee shall be charged for the initial operational permit and for the renewal of the Operational Permit as per Article 1.

10.7 Dry Line Sewers. Dry line sewers may be required as part of the the system design. These dry line sewers shall be employed to accomplish later sewer connection when they would serve to eliminate future construction or reconstruction problems.

SECTION 11: ON-SITE WASTE MANAGEMENT

Subsurface disposal systems shall be operated and maintained in ways that minimize health hazards and water pollution and minimize the risks of system failure. The health officer shall require maintenance that is appropriate to the design of the system, in keeping with the rules and guidelines of the State Department of Health.

11.1 When existing subdivisions or multiple housing units or other facilities have been designed to have gross densities that exceed three and five-tenths (3.5) housing units per acre or waste flows of one thousand two hundred (1,200) gallons/acre/day, and have valid permits, on-site sewage disposal systems shall not be permitted unless the perpetual maintenance and management of the sewage disposal systems are under the responsibility of an approved management system as identified in paragraphs 11.2 and 11.3 of this section or under operational permit issued by the health officer as per Section 10.6.

11.2 Proposed subsurface sewage disposal systems to be located within the boundary of an approved sewerage planning area shall conform with the provisions and standards of the jurisdictional sewer utility.

11.3 Sewage disposal systems serving housing densities and/or flows exceeding that identified in paragraph 11.1 of

3.3.3.5 of the EPA Design Manual. Sieve analysis shall be used as the primary aid to determine texture, when deemed necessary by the health officer. Site vegetation, percolation tests and winter observation may be employed to determine acceptability for on-site disposal purposes.

14.7 Soil Evaluations and Reports. Soil evaluations and reports shall be performed and submitted by or under the direct supervision of the health officer, a registered sanitarian, professional engineer, registered soil scientist (American Registry of Certified Professionals in Agronomy, Crops and Soils) or certified designer all of which must have knowledge and experience in the areas of soil and waste water treatment and disposal.

SECTION 15: GEOLOGICALLY SENSITIVE AREAS

In an area declared by the Board of Health to be "geologically sensitive", the health officer shall require such additional reasonable standards adopted by the Board of Health as are necessary to prevent health hazards and water pollution.

SECTION 16: INSPECTIONS

16.1 All construction done and materials used in on-site sewage disposal system shall be in conformance with the provisions of Appendix B of this Article or approved design and be subject to inspection by the health officer at any reasonable time. He/she may stop work and revoke the sewage disposal system permit when the provisions of these rules and regulations have been violated. Use of the system is unlawful until approval is given by the health officer. The date of approval shall appear on the permit.

16.1.1 The final inspection of standard on-site sewage disposal systems shall be under the following conditions:

a. The septic tank construction must be completed and the covers removable so that the inside of the tank may be inspected.

b. The entire absorption system must be completed except for backfilling with top soil over the gravel protection material.

16.1.2 Prior to construction of a designed on-site sewage disposal system, the installer shall notify the designer as to the date of start of construction. The installer shall also notify the designer when the on-site sewage disposal system is complete and before it is covered.

16.1.3 Designed on-site sewage disposal systems may be subject to additional inspections as outlined below:

a. Prior to the installation of a designed septic system, the designer may be required to certify to the health officer that the system is installable as per the design.

SECTION 24: APPEALS

Any person aggrieved by a decision, an inspection or notice made by the health officer shall have the right to appeal the matter as specified in Article I.

SECTION 25: WAIVER OF REGULATIONS

Whenever a strict interpretation of these regulations would result in extreme hardship, the health officer may, upon concurrence of the Board of Health, waive such regulations or portion thereof; PROVIDED, That the waiver is consistent with the intent of these regulations and that no public health hazard will result. In the event the regulation to be waived is also a State law or regulation, the concurrence of the Secretary of the Washington State Department of Social and Health Services must be obtained prior to the granting of the waiver.

SECTION 30: MC ALLISTER GEOLOGICALLY SENSITIVE AREA.

30.1 Creation of Geologically Sensitive Area. Pursuant to Chapter 70.05 RCW and Article IV, Section 15 in the Thurston County Sanitary Code, the area described in subsection 30.2 of this Section 30 constitutes a geologically sensitive area to be known as the McAllister Geologically Sensitive Area (McAllister GSA).

30.2 Area of McAllister GSA. The McAllister GSA comprises the territory shown on the parcel specific map entitled "McAllister Geologically Sensitive Area, August 13, 1990", with a notation referring to this Resolution in the custody of the Thurston County Public Health and Social Services Department.

30.3 Sewage Disposal Regulations. In addition to any other requirements imposed by this Code, the following requirements shall apply within the McAllister GSA:

(a) Any on-site sewage disposal system for which a permit to install, connect, repair, alter, extend or relocate is issued on or after August 15, 1990

(i) shall contain a pressure distribution system in accord with State Department of Health Technical Review Committee Guidelines;

(ii) shall have SSAS trenches or beds no deeper than thirty (30) inches below the surface of the ground;

(iii) shall have at least thirty-six (36) inches of separation between the bottom of any SSAS trenches or beds and the maximum seasonal groundwater elevation or any impermeable layer. The health officer may require greater vertical separation pursuant to Section 5.2.2. of this Article IV. However, notwithstanding the provisions of Section 5.2.2 the health officer may not reduce the thirty-six (36) inch vertical separation required by this Section.

(b) An operational permit is required for any on-site sewage disposal system for which a permit to install, connect, repair, alter, extend or relocate is issued on or after August 15, 1990, or which is part of a sale of property on or after August 15, 1990. The operational permit may be re-
voked when:

(i) the on-site system fails to meet the maintenance and operational conditional or requirements of the permit, or

(ii) the on-site system fails to meet any standard or requirement imposed by law. The operational permit shall be revoked when any dwelling unit or other premises where sewage originates is required to connect to public sewer pursuant to subsection 30.3(c), below. Unless inconsistent with this section, all other provisions of Article IV, Section 10.6 of this Code shall apply to operational permits. (c) Whether or not an operational permit is required, any dwelling unit or other premises where sewage originates within two hundred (200) feet of a public sewer system shall be connected to the sewer system pursuant to Article IV, Sections 6.1 through 6.1.4 and 6.2 through 6.6.2 of this Code.

(d) Building site approvals may be issued for uses other than single or multi-family residential only if

(i) the designed sewage flow is no greater than 450 gallons per five acres per day, and

(ii) the waste entering on the on-site system is equivalent in quality to typical residential waste.

30.4 Agriculture.

(a) The Thurston County Cooperative Extension Office is requested annually to review best management practices for the use of pesticides and fertilizers with the McAllister GSA. The procedures used in this review should be submitted to the Board of Health for approval by January 1, 1991.

(b) The health officer shall work with the North Thurston School District and any public or private agency owning or operating parks within the McAllister GSA to obtain better compliance with best management practices for pesticides and fertilizers.

30.5 Stormwater and Hazardous Materials.

(a) Pesticides shall not be used to maintain any County property in McAllister GSA.

(b) The health officer shall send letters to the director of the State Department of Transportation and to the governing officials of the Fort Lewis Military Reservation, Nisqually Indian Reservation and Puget Power requesting that chemical methods not be used to maintain any rights-of-way located within the McAllister GSA or over groundwater which the health officer deems is connected to the aquifer underlying the McAllister GSA.

(c) The health officer shall write a letter to the director of the State Department of Ecology requesting that applications for the use of aquatic pesticides in Lake St. Clair be granted only upon a finding by the health officer that the proposed use will not likely threaten groundwater.

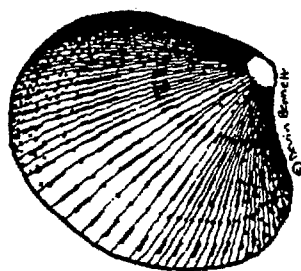
(d) The health officer shall advise Burlington Northern Railroad and Amtrak of the vulnerable nature of groundwater in the McAllister GSA and request that each:

- (i) cease discharging sewage and waste water along tracks within the McAllister GSA, and
- (ii) cease using chemical methods to maintain rights-of-way with the GSA. The health officer shall also request Burlington Northern and Amtak to coordinate emergency management procedures with the County for spills and accidents within the McAllister GSA.

(e) By December 31, 1990, the health officer shall review existing and proposed requirements for stormwater management governing public or private developments. If the health officer deems such requirements insufficient to protect groundwater in the McAllister GSA, he shall propose stormwater management requirements which are sufficient to that end.

30.6 Education. The Office of Water Quality and Resource Management shall conduct a public education program in the McAllister GSA. The purpose of this program shall be to protect groundwater by instructing residents in proper lawn care and gardening practices, septic system maintenance, and handling and disposal of household hazardous waste.

Appendix 3



THE
ADMINISTRATIVE
PROCESS

2. Administrative Hearing and Administrative Order.
Article I, Section 8.

If a violator does not respond to the notice of violation by the time limit established therein, the department should call for an administrative hearing. Such a hearing is necessary before any order can be issued by the department.

The department must notify the violator of the administrative hearing. The notice for the administrative hearing shall: a) be in writing, b) include a brief and concise description of the cause for the administrative hearing, c) state the date, time and location of the administrative hearing, and d) be served upon the person in the manner provided in Section 7.1 of Article I.

If, after the administrative hearing, the hearing officer determines that a violation of the code has occurred or is occurring, he may then issue an order. Such an order may include the suspension or revocation of the effected permit or license, the authorization for continued operation subject to specific terms and conditions or other appropriate action authorized by the code. Other action authorized by the code includes the imposition of a civil penalty of not less than \$25 nor more than \$200 for each violation. Article I, Section 12.3.

A violator has the chance to appeal the findings and order made pursuant to an administrative hearing. Similar to the appeal for the notice of violation, an appeal of the administrative order shall suspend any of the required action except in the presence of an emergency health hazard as set forth in Section 7.3.

3. Referral to Prosecuting Attorney's Office.

After the administrative process has been followed and exhausted, the matter should then be turned over to the Prosecuting Attorney's Office. However, if there is a case presenting an emergency, the Prosecuting Attorney's Office should be contacted early in the proceedings.

If the above procedure is followed, the amount of time and energy a staff person spends on a case should be significantly reduced. This is because one letter is sent out, the notice of violation, with a time line for compliance. If no compliance is accomplished within this set time, the next step, an administrative hearing, should be pursued immediately. This action reduces the back and forth correspondence that can drag a case on for several months to several years.

CASE CHECKLIST

1. Received and/or discovered complaint on _____.
2. Investigated and confirmed complaint on _____ (date).

Facts recorded by:

- a) photographs
- b) field notes
- c) interviews with neighbors,, etc.

3. Send notice of violation:

- a) Statement that there has been violation of code.
- b) Recite specific provisions of the code that have been violated.
- c) Recite specific facts that have been documented which constitute the violation of the code.
- d) Establish a reasonable time line for compliance.
- e) Advise violator of opportunity to appeal notice.

4. If no action and/or compliance by the time lines set forth in the notice of violation, initiate an administrative hearing.
5. Hold an administrative hearing and have order issued.
6. If no compliance with the administrative order, refer matter to Prosecuting Attorney's Office.

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November 7, 1990
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does not stray into any area in which the general public is excluded, the search would be considered valid under the open fields doctrine.

When a property owner does not consent to an investigation of his property, the Health Department must secure a search warrant from the court. An administrative inspection warrant may be based on either 1) specific evidence of an existing violation, or 2) a general inspection program based on reasonable legislative or administrative standards derived from neutral sources.

An administrative warrant application based on the general inspection program basis must describe the program in sufficient detail to show that a) there is a reasonable legislative or administrative inspection plan, b) that the plan is justified and reasonable, and c) the desired inspection fits within the plan. A warrant application which is silent as to the precise nature of the inspection program will be fatally flawed. Thus, if an owner/occupant refuses entry to the health officer during a sanitary survey, an inspection warrant may be requested even if the health officer has no specific evidence of an existing violation. The warrant would be requested under the theory of a general inspection program. Therefore, it is important that the Health Department has a plan which describes the nature of the inspection program in sufficient detail and based on neutral criteria. Requiring that a warrant be based on this latter program, absence specific evidence of a violation, insures that any inspection is reasonable and not subject to the unbridled discretion of the agency making the inspection.

Alternatively, an administrative inspection warrant may be based on specific evidence of an existing violation. Under this basis, the affidavit must reflect a probable cause that a violation of the law was occurring on the premises sought to be searched at or about the time of the issuance of the warrant.

The functions of a warrant for an administrative inspection provide assurances from a neutral officer that the inspection is reasonable under the constitution, and authorized by statute. Further, a warrant would advise the owner of the scope and object of the search beyond which limits the inspector is not inspected to proceed.

In the event a warrant is needed, the Prosecuting Attorney's Office should be involved to prepare and make the application for the warrant.

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In summary, before a health official may enter onto private property for the purposes of conducting water quality surveys or general inspections he/she must either secure 1) the occupant's consent to an inspection; or 2) an inspection warrant.

An inspection warrant will issue either on 1) specific evidence of an existing violation; or 2) a general inspection program based on neutral criteria.

(WORK\MEMOS\HOFSTAD.EP)(11:)



Thurston County Prosecuting Attorney

2000 Lakendge Drive S.W., Olympia, WA 98502
Telephone (206) 786-5540

PATRICK D. SUTHERLAND
PROSECUTING ATTORNEY

November 7, 1990

M E M O R A N D U M

TO: Environmental Health Staff

FROM: Elizabeth Petrich
Deputy Prosecuting Attorney

RE: Administrative Inspections/Searches

The Health Department, in carrying out its duty of protecting the public health and enforcing the sanitary and water quality regulations, often needs to enter private property. This memorandum addresses when, how and under what conditions health personnel may enter onto private property.

The code authorizes the health officer or his designee to inspect premises in the performance of his/her duty. However, administrative inspections are subject to constitutional scrutiny. Since 1967, the courts have recognized that administrative searches of residences to enforce municipal fire, health, or housing codes are subject

Article I of the Thurston County Sanitary Code provides that:

11.1 Enforcement.

. . . In order to enforce the sanitary code the health officer is hereby authorized upon showing adequate identification to enter at any premises.

11.2 Inspection.

All premises covered by the sanitary code shall be subject to the inspection of the health officer . . . no person shall refuse to allow the health officer to fully inspect any and all premises requested in the performance of his/her duty.

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to the Fourth Amendment's prohibition against unreasonable searches and seizures.

The general rule is that

except in certain carefully defined classes of cases, a search of private property without proper consent is unreasonable unless it has been authorized by a valid search warrant.²

The basic purpose of the Fourth Amendment is to safeguard the privacy and security of individuals against arbitrary invasions by government officials. While routine inspections of the physical condition of private property is a less hostile intrusion than the typical police officer's search for fruits of a crime, such inspection does in fact jeopardize the interest of the property owner by potentially subjecting him to civil penalties and criminal processes to enforce a health code.

As indicated above, a warrant is not required when the owner voluntarily consents to the search. Thus, where consent is given to a health officer to conduct searches or inspections without warrants, these searches have been recognized to be constitutionally valid. However, there are two caveats to the consent exception to the warrant requirement. Consent must be unambiguous. Consent given by one who believes he is required to do so by law is not a knowing and voluntary waiver of constitutional rights, but is instead an acquiescence to a claim of lawful authority. The second caveat to the consent exception is where consent to inspect is given far in advance of the time of the actual inspection. For example, if the health officer obtains consent on day one and does not conduct the inspection until day 30, the inspection will be deemed to be too far removed in time from the occupant's consent as to make it nonconsensual.

A second exception to the warrant requirement is under the open fields doctrine. There is no Fourth Amendment protection against observations by a public official of what is observable by the general public while located where they are lawfully allowed. For example, if the health officer observes something from the street, and the health officer

²Camara v. Municipal Court, 387 U.S. 523, 87 Sup.Ct. 1723, 18 Law.Ed.2d 930 (1967).

THE
CIVIL
INFRACTION
PROCESS

RECEIVED
FEB 8 1991
H-1-91

RESOLUTION NO. H-1-91

A RESOLUTION designating violations of Thurston County Sanitary Code Articles IV and V as civil infractions pursuant to Chapter 7.80 RCW and requiring monetary payments for such infractions; amending Sanitary Code Article I, Sections 8, 9, 11, 12; Article IV, Sections 23 and 24 and Article V, Sections 26 and 30.1; and adding a new section to Article I.

WHEREAS, violations of regulations governing the disposal of sewage and the handling of solid waste create conditions which are harmful to the public health, safety and welfare, and may cause land, air and water pollution;

WHEREAS, it is important to remedy this harm to the greatest extent feasible; and

WHEREAS, the civil infraction procedure established in Chapter 7.80 RCW should provide an effective method of remedying these violations, protect the public from the harmful effects of these violations, aid enforcement and reimburse the County for the expenses of enforcement.

NOW, THEREFORE, BE IT RESOLVED BY THE THURSTON COUNTY BOARD OF HEALTH as follows:

Section 1. A new subsection 11.3 is hereby added to Thurston County Sanitary Code (Sanitary Code) Article I, Section 11 to read as follows:

11.3 Relation of Administrative Procedures. The civil infraction procedure adopted by Section 18 of Article I provides an additional method of civil enforcement to administrative procedures found in Sections 7, 8 and 9 of this Article I. The initiation of a proceeding under Sections 7, 8 or 9 of Article I is not a prerequisite to the initiation of a civil infraction proceeding under Section 18 of Article I. The initiation of a proceeding under Sections 7, 8 or 9 of Article I does not preclude the initiation of a civil infraction proceeding under Section 18 of Article I.

Section 2. Sanitary Code Article I, Subsection 12.3 is hereby amended to read as follows:

12.3 Civil Penalty Monetary Liability. Any person violating the Code shall be subject to a civil penalty of not less than \$25.00 for each violation. the provisions of Article IV or Article V of this Code is

subject to monetary liability under the civil infraction procedure provided in Section 18 of this Article I.

Section 3. Sanitary Code Article I, Subsection 12.4 is hereby amended to read as follows:

12.4 Misdemeanor Penalty. ~~Pursuant to RCW 70.05.120, a~~Any person violating this Code shall be guilty of a misdemeanor, and upon conviction shall be subject to a fine of not ~~less than \$25.00 nor more than \$100.00~~ \$500.00 or to imprisonment in the county jail not to exceed ninety (90) days or to both fine and imprisonment.

Section 4. Sanitary Code Article IV, Section 23 is hereby amended to read as follows:

Section 23: ~~PENALTY~~ CIVIL INFRACTION. ~~Penalties shall be levied as per Article I.~~

23.1 The violation of any provision of this Article IV is designated as a civil infraction pursuant to Chapter 7.80 RCW as follows:

(1) any violation causing unsanitary conditions or any threat to public health is a Class 3 civil infraction. Each day of any such violation is a separate civil infraction; A notice of infraction may be issued for each day of any such violation, however the health officer is not required to issue a notice of infraction for each day of such violation.

(2) any other violation is a Class 3 civil infraction. Each day of any such violation is a separate civil infraction; A notice of infraction may be issued for each day of any such violation, however the health officer is not required to issue a notice of infraction for each day of such violation.

23.2 Civil infractions shall be determined pursuant to Chapter 7.80 RCW and Article I, Section 18 of this Sanitary Code.

Section 5. Sanitary Code Article IV, Section 24 is hereby amended to read as follows:

SECTION 24: APPEALS. Any person aggrieved by a decision, an inspection or notice made by the health officer shall have the right to appeal the matter as specified in Article I. Civil infractions shall be heard and determined according to Chapter 7.80 RCW.

Section 6. Sanitary Code Article V, Section 26 is hereby amended to read as follows:

SECTION 26: ~~VIOLATIONS~~ CIVIL INFRACTION.

26.1 ~~Whenever the health officer determines that there are reasonable grounds to believe that there has been a violation of this Article, the health officer shall give notice of the violation to the responsible party in~~

~~accordance with Article I of the Thurston County Sanitary Code.~~

~~26.2 Any person aggrieved by the contents of a notice of violation shall have the right to appeal the matter requesting either an administrative hearing or a hearing before the Board of Health in accordance with Article I.~~

26.1 The violation of any provision of this Article V is designated as a civil infraction pursuant to Chapter 7.80 RCW as follows:

(1) any violation of Section 14.2.1 or 24.1 is a Class 2 civil infraction;

(2) any violation of Section 6 is a Class 2 civil infraction;

(3) any violation of Section 14.2.3, 24.2 or 24.6 is a Class 2 civil infraction. Each day of any such violation is a separate civil infraction; A notice of infraction may be issued for each day of any such violation, however the health officer is not required to issue a notice of infraction for each day of such violation.

(4) any other violation is a Class 3 civil infraction. Each day of any such violation is a separate civil infraction; A notice of infraction may be issued for each day of any such violation, however the health officer is not required to issue a notice of infraction for each day of such violation.

26.2 Civil infractions shall be determined pursuant to Chapter 7.80 RCW and Article I, Section 18 of this Sanitary Code.

Section 7. Sanitary Code Article V, Section 30 is hereby amended to read as follows:

SECTION 30: CRIMINAL PENALTIES.

~~30.1 Civil Penalties. Civil penalties may be levied as per Article I of the Thurston County Sanitary Code.~~

~~30.2 Criminal Penalties. Criminal penalties may be levied as per Article I of the Thurston County Sanitary Code.~~

Section 8. A new Section 18 is added to Sanitary Code Article I to read as follows:

SECTION 18: CIVIL INFRACTIONS.

18.1. Purpose. It is imperative that county health regulations governing the disposal of sewage and the handling of solid waste be properly enforced. To better accomplish this goal, the Thurston County Board of Health has designated certain violations of this Sanitary Code to be civil infractions pursuant to Chapter 7.80 RCW. The purpose of this action is remedial. Use of the civil infraction procedure will better protect the public from the harmful effects of violations, will aid enforcement, and

will help reimburse the County for the expenses of enforcement.

18.2. Determination of Civil Infractions. Violations of the provisions of Articles IV and V of this Sanitary Code are designated as civil infractions pursuant to Chapter 7.80 RCW. Civil infractions shall be heard and determined according to Chapter 7.80 RCW, as amended, and any applicable court rules.

18.3. Designation of Enforcement Officer. The enforcement officer for violations of the Thurston County Sanitary Code which are designated as civil infractions is the health officer or his or her designee.

18.4. Identification of Violators. An enforcement officer issuing a notice of civil infraction shall require the person receiving the notice to identify himself by producing a valid driver's license or identicard. If the person receiving the notice is unable to produce such a card, the enforcement officer shall require the person to give name, address and date of birth. If the person is unable or unwilling to give such information, the enforcement officer may, with the assistance of a deputy sheriff, detain such person for a period of time not longer than is reasonably necessary to identify the person.

18.5. Administrative Responsibilities. The Thurston County Health Officer is responsible for assuring County compliance with RCW 7.80.150.

18.6. Recording of Civil Infractions.

18.6.1 Notice of civil infraction may be recorded with the Thurston County Auditor against the property on which the violation took place in the following instances:

(a) The person receiving the notice of civil infraction does not respond as required by RCW 7.80.080;

(b) The person receiving the notice of civil infraction fails to appear at a hearing requested under RCW 7.80.080(3) or (4);

(c) The person assessed a monetary penalty for the civil infraction fails to pay such penalty within the time required by law and does not appeal the penalty. If the penalty is appealed, the enforcement officer may record the notice of civil infraction only if a penalty remains unpaid after a final appellate determination has been entered.

18.6.2 The Auditor shall record any notice of civil infraction submitted for recording under this section.

Section 9. Effective Date. This Resolution shall take effect on April 1, 1991.

Section 10. Expiration Date. This Resolution shall expire one year from the effective date of the Resolution, unless further action is taken by the board of health.

Section 11. Severability. If any provision of this Resolution or its application to any person or circumstance is held invalid, the remainder of the Resolution or the application of the provision to other persons or circumstances is not affected.

ADOPTED: January 22, 1991.

ATTEST:

BOARD OF HEALTH
Thurston County, Washington

Patricia Overman
Clerk of the Board

Markie Chugan
Chairman

APPROVED AS TO FORM:

PATRICK D. SUTHERLAND
PROSECUTING ATTORNEY

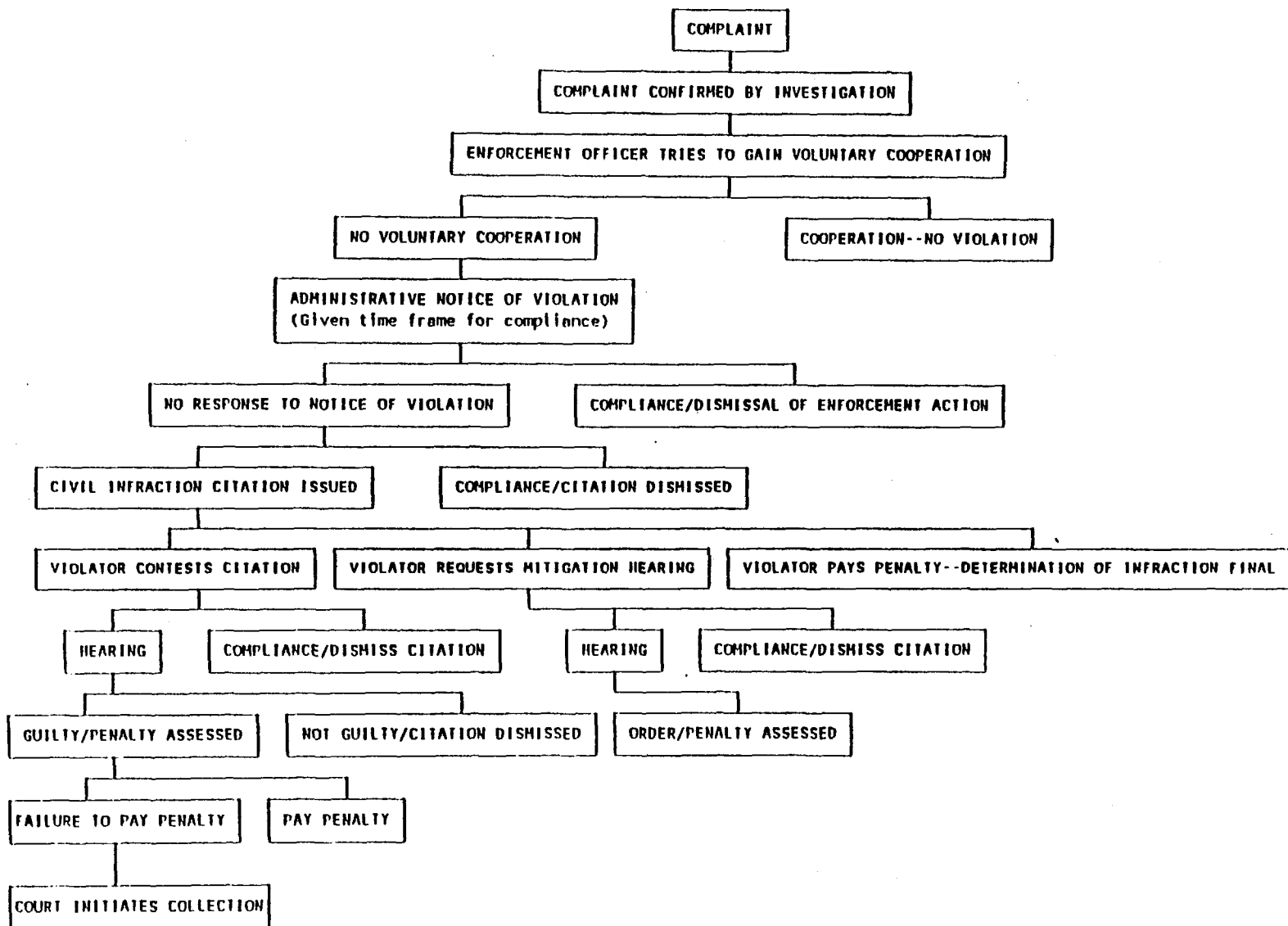
George L. Bernier Jr.
Member

By: Elizabeth Petrich
Elizabeth Petrich
Deputy Prosecuting Attorney

Les Eldridge
Member

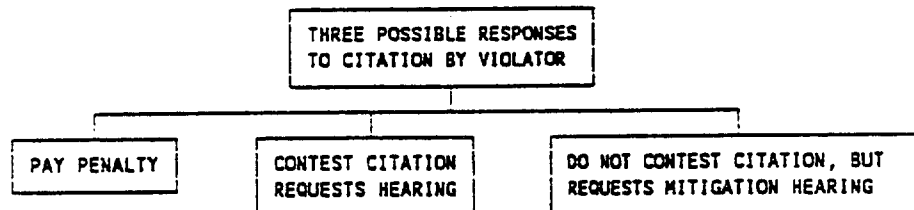
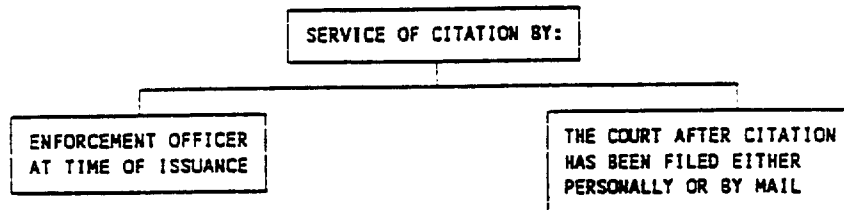
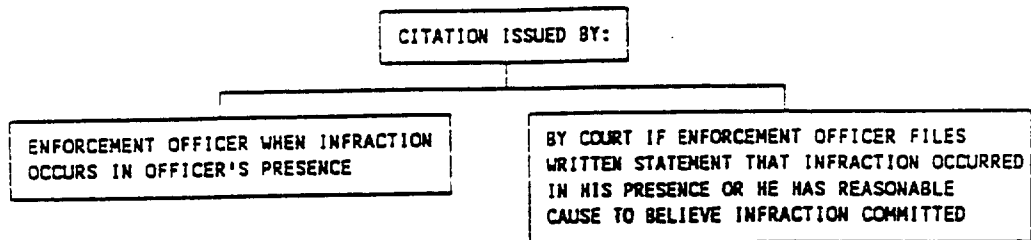
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NOTICE OF CIVIL INFRACTION PROCESS



RCW 7.80

CIVIL INFRACTIONS



First Contact Letter

April 10, 1991

Mr. John Smith
1234 Friendly Drive NW
Olympia WA
98502

Subject: On-site Sewage System, repair required
Log Number: 91-54-077

Dear Mr Smith,

The Environmental Health Division has received information regarding a possible violation of the Thurston County Sanitary Code, on your property at 1234 Friendly Drive NW, Parcel Number 4777 03 07700.

We have investigated the report and have found that there is surfacing sewage effluent.

In order to resolve this issue, please contact me at 786-5455 to discuss possible methods of correction. If I am not available when you call, please leave your name, phone number and the best way to reach you. Please use the log number (91-54-077) to help us respond to you.

If there are any matters that need to be clarified or any factual matter corrected, we will assist in every way we can.

Sincerely,

David Tipton R.S.

cc: Phil Brinker
Section Sup.

May 5, 1991

Mr. John Smith
1234 Friendly Drive NW
Olympia WA
98502

Subject: Notice of Violation and order to Correct

Log Number: 91-54-077

Dear Mr. Smith,

The Division of Environmental Health has received information that there is sewage on the surface of the ground on your property at 1234 Friendly Drive NW, Olympia WA, (lot 77, block 3 Plat of Prestige Estates, Parcel No. 4777 03 07700). The surfacing sewage was confirmed by direct observation and by laboratory analysis. This surfacing sewage is a violation of Article IV sections 1.2, 1.2.1, 1.3 and 17.3 of the Thurston County Sanitary Code.

You are hereby directed to take the following actions:

1. Complete and submit a sewage system repair permit application by May 15, 1991. (Application and instructions enclosed)
2. Engage the services of an Engineer licensed in the State of Washington or a Sewage System Designer licensed by Thurston County Health Department. A completed design shall be submitted by June 15, 1991.
3. Engage the services of a licensed Installer and complete the installation by July 15, 1991.
4. Until the sewage system is repaired, actions to eliminate the surfacing sewage, and or reduce the health hazard are required. A proposal for temporary health hazard reduction must be submitted in writing with your repair permit application by May 15, 1991. See the enclosed list of methods, some of which may be applicable in your case.

Page 2 of 2

5. At your request, an appointment can be arranged to assist you in completing the listed requirements.

You may appeal the requirements listed above by requesting an Administrative Hearing in writing on or before May 15, 1991. You would be notified of the hearing date and time.

Failure to take these actions, or to appeal this directive may result in the issuance of a Citation for a Class 3 civil infraction in the amount of \$50.00. Each day of any such violation is a separate civil infraction. This citation must then be resolved through the Thurston County District Court.

If you have questions in any of these matters please call 786-5455, the Environmental Health Office.

Sincerely,

David Tipton, RS
Compliance Officer

cc: Prosecuting Attorney
Phil Brinker
Gregg Grunenfelder

CDL B-1 90-91
CPSAMPLE.405

I - NOTIFICATION PROCESS

A. Send notice of violation

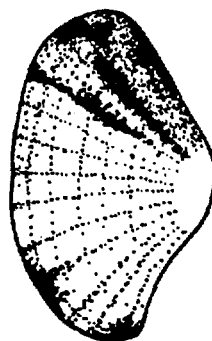
- 1. State there is code violation**
- 2. Recite provisions of code in violation**
- 3. Recite the facts that document code violation**
- 4. Recite statement of corrective action required**
- 5. Establish time line for compliance**
- 6. Advise violator of opportunity to appeal**
 - a. If violator requests appeal - hold Administrative Hearing**
- 7. If no action by time line stated in the notice of violation the department shall exercise the option to:**
 - a. Issue civil infraction, or**
 - b. Conduct Administrative Hearing**
- 8. Non-compliance - refer to prosecuting attorney**

II - ENFORCEMENT

A. Case checklist:

- 1. Case Summary**
 - a. Cite code violation and evidence**
 - b. Brief narrative**
- 2. Case Chronology**
 - a. Date complaint received**
 - b. Dates complaint investigated**
 - c. Dates of evidence**
 - d. Dates of correspondence and actions**
- 3. Witness List**
 - a. Name(s), addresse(s), telephone numbers(s)**
 - b. Include self and complainant(s)**
- 4. Evidence package**
 - a. Photographs, lab results, statements, etc.**
- 5. Copies of all correspondence**
- 6. Pertinent copies of records on file**
 - a. LCA/Operation permit reports**
 - b. Building Site Application**
 - c. Approved permits**
 - d. As-Builts**
 - e. Administrative hearing action(s), decision(s)**
- 7. Site information**
 - a. Parcel number, legal description**
 - b. Property address of violation site (if available)**
 - c. Name, address of property owner or responsible party if other than occupant**
- 8. Identification verification**
 - a. Name**
 - b. Drivers License Number**
 - c. Date of birth**
- 9. Infraction citation if civil infraction is/will be issued.**

Appendix 4



ARTICLE VI

THIS ARTICLE CONTAINS THE RULES AND REGULATIONS OF THE THURSTON COUNTY BOARD OF HEALTH GOVERNING NONPOINT SOURCE POLLUTION.

SECTION 1: Authority

SECTION 2: Purpose Objectives, and Applicability

SECTION 3: Definitions

SECTION 4: Practices and Procedures

SECTION 5: Inspections and Administration

SECTION 6: Civil Infractions

SECTION 7: Injunctive Actions

SECTION 8: Criminal Penalty

SECTION 9: Clean-up Responsibilities

SECTION 10: Severability

SECTION 11: Effective Date and Review Committee

DRAFT #6: 3/3/92

SECTION 1: Authority

1.1 The Thurston County Board of Health is granted authority in Chapter 70.05 of the Revised Code of Washington (RCW) to implement this Article and the following regulations governing nonpoint source pollution. The requirements of this Article are in addition to Article IV and V of the Thurston County Sanitary Code and existing state regulations, including Chapter 90.48 RCW and Chapter 173-201 WAC which regulate nonpoint source pollution.

SECTION 2: Purpose, objective, and applicability

2.1 The purpose of this Article is to establish a Thurston County nonpoint pollution ordinance which fits into a comprehensive package of approaches to nonpoint pollution source control and is consistent with other city, county, and state regulations. This Article is consistent with the Compliance Memorandum of Agreement (May 1988) among the Department of Ecology, The Thurston Conservation District and The Washington State Conservation Commission. This article establishes a set of practices and procedures which protect the waters of Thurston County against nonpoint source pollution. It enables protection of public health, protection and improvement of water quality, and protection of present and future uses of water while recognizing the balance of community viability and environmental protection. It applies to all persons, activities and locations in Thurston County.

SECTION 3: Definitions

When used in this Article, the following terms shall have the meanings defined below.

Agronomic Rates - means the rates of application of sludges, manures, or crop residues specified by the appropriate fertilizer guide for the crop under cultivation.

Animal waste - means urine or fecal waste (containing fecal coliform bacteria) from domestic animals; animal waste is not limited to solid fecal material.

Best Management Practice (BMP) - an engineered structure or management activity, or combination of these, that eliminates or reduces an adverse environmental effect of a pollutant. These may have specifications or may be something as simple as following label directions.

Conservation District (District) - means the Thurston Conservation District.

Department - means the Thurston County Public Health and Social Services Department.

DRAFT #6: 3/3/92

Domestic animals - means animals that are habituated to live in or about the habitations of people.

Farm operator - means the person(s) who are responsible for the daily farm management.

Farm plan - means a plan developed by a farm operator in cooperation with a resource agency and approved by the Conservation District board of supervisors for managing resources on a farm to protect water quality.

Ground water - means water in a saturated zone or stratum beneath the surface of land or below a surface water body.

Hazardous materials - means those materials which are acutely toxic, ignitable, corrosive, reactive, persistent, carcinogenic, ; or leach hazardous constituents, as described in Chapter 173-303 WAC. Examples include, but are not limited to pesticides, acids, paint strippers, and antifreeze.

Hazardous waste - means those wastes which are acutely toxic, ignitable, corrosive, reactive, persistent, carcinogenic, or specifically listed as hazardous waste or leach hazardous constituents, as described in Chapter 173-303 WAC. Examples include, but are not limited to pesticides, acids, paint strippers, and antifreeze.

Health officer - means the Thurston County Health Officer or his/her authorized representative.

Moderate risk waste - means two types of hazardous wastes: 1)hazardous waste generated by households, called Household Hazardous Waste; and 2)hazardous waste generated by businesses in amounts less than the quantity exclusion limit established in Chapter 173-303-070 through 173-303-103 WAC, which is most commonly 220 pounds per month or batch, called Small Quantity Generator waste.

Nonpoint pollution - means pollution that enters any waters from any dispersed land-based or water-based activities, including but not limited to atmospheric deposition, surface water runoff from agricultural lands, urban areas, or forest lands, subsurface or underground sources or discharges from boats or marine vessels.

Person - individual, municipality, political subdivision, government agency, partnership, corporation, business or any other organization.

Recycling - means to use, reuse or reclaim a material in a manner allowed by law.

Runoff - means the portion of precipitation on the land that is not absorbed by the soil or plant material or evapotranspiration and which reaches a waterway.

Surface water - means any body of water, whether fresh or marine, which either flows or is contained in natural or artificial depressions for significant periods of the year. Such bodies include, but are not limited to, natural and artificial lakes, ponds, rivers, streams, swamps marshes, tidal waters, wetlands and natural or man-made drainage systems.

SECTION 4: Practices and Procedures

4.1 Moderate risk waste and petroleum products, including but not limited to oil and grease, shall be disposed of by recycling or use of a hazardous waste management facility operating under interim status or with a permit issued by EPA or an authorized state. Such facilities include but are not limited to the County's Hazo House for citizens or contracted hazardous waste management facilities for moderate risk waste generators. No person shall, intentionally or negligently, dump or deposit, or permit the dumping or depositing of any such waste in any other manner, including onto or under the surface of the ground or into surface water or ground water. Moderate risk waste, petroleum products, and hazardous materials must be kept in containers and must be stored in such a manner and location that if the container is ruptured, the contents will not discharge, flow, be washed or fall into surface water or ground water. This does not supersede any regulations as stated in the Uniform Fire Code. Any person violating this section or owning or in possession of the premises, facility, vehicle or vessel from or on which the waste is discharged or placed shall notify the Department of the location and nature of the incident and shall immediately take or cause to be taken all necessary steps to prevent injury and protect waters from pollution. The Health Officer may notify Washington State Department of Ecology of the discharge and request their appropriate response.

4.2 (a) Except as provided below, farm operators and animal owners shall not allow domestic animals to have access to surface water. This may be accomplished through use of fencing, vegetative barriers, natural features or other appropriate measures. Domestic animals may be allowed access to surface water which is the only available watering source if (i) watering locations are constructed in the water body through fencing, vegetative barriers or other appropriate means, and (ii) the watering location and its immediate approaches are protected from erosion through rocking or other appropriate means. This sub-section does not apply to small domestic animals, such as dogs and cats, kept as pets for noncommercial purposes.

(b) No person shall exceed agronomic rates in the application of sludge, manure, or crop residues.

(c) Farm operators and animal owners shall not allow runoff to carry domestic animal waste into surface water. This may be accomplished through appropriate measures such as installing gutters and downspout to prevent runoff from mixing with animal waste, maintaining proper stocking rates, locating livestock sacrifice areas as far away as practicable from surface water, and maintaining proper pasture management practices or other best

DRAFT #6: 3/3/92

management practices as recommended by the Soil Conservation Service or Conservation District.

- (d) This Section 4.2 does not apply to
 - (i) farm operators with current District approved farm plans which are being implemented and maintained as scheduled;
 - (ii) animal waste which enters surface water or ground water as a result of a storm event equal to or exceeding the 10 year storm event as defined in Appendix H of the Drainage Design and Erosion Control Manual for Thurston County and the Cities of Lacey, Olympia, and Tumwater.
 - (iii) stock watering ponds which are located farther than 300 feet from a drinking water well and do not have outlets to surface water.

4.3 These violations may occur as incidents or as on-going practices. Each incident and each day in which an on-going violation continues is a separate violation.

SECTION 5: Inspections and Administration

5.1 The health officer shall request permission from the property owner to conduct an investigation. If permission is denied, the health officer shall have recourse to the courts to obtain a search warrant. Findings shall be noted and kept on file. A copy of the investigation report shall be furnished to the responsible person within 14 days of the completion of the investigation.

SECTION 6: Civil Infractions

6.1 Violations of this Article are civil infractions subject to penalties authorized by Chapter 7.80 RCW and Article I of this Code. The Health Officer and any designee are the compliance officers authorized to enforce the provisions of this Article.

6.2 If a violation of Section 4.1 of this Article involving the dumping or depositing of , moderate risk waste, or petroleum products, including but not limited to oil and grease, occurs in the presence of an compliance officer, the officer shall issue a notice of civil infraction to the violator. If an compliance officer has reasonable cause to believe that such a violation has been committed, the appropriate court shall be requested to issue a notice of civil infraction pursuant to Chapter 7.80.050 RCW. Such violations are Class 1 civil infractions.

6.3 If an compliance officer has reasonable cause to believe that a violation of Section 4.1 of this Article involving the storage or placement of hazardous materials, moderate risk waste, or petroleum products, including but not limited to oil and grease, has occurred, then the compliance officer shall notify the person responsible in person or by telephone, and by

DRAFT #6: 3/3/92

mail, requesting compliance within a specified time period. The length of this period shall depend on the risk to health and the environment posed by the violation and shall not exceed ten (10) working days. If the violation continues after the expiration of this time period, the compliance officer may issue or request a court to issue a notice of civil infraction pursuant to RCW 7.08.050. Such violations are Class 3 civil infractions.

6.4 If an compliance officer has reasonable cause to believe that a violation of Section 4.2 of this Article has occurred, the officer shall notify the person responsible in person or by telephone, and by mail. This notification shall give such person ten (10) working days to seek technical assistance, if needed, and to begin planning and implementing measures to correct the violation. If these steps are not taken within ten days or if reasonable progress is not subsequently made to correct the violation, the compliance officer may issue or request a court to issue a notice of civil infraction pursuant to RCW 7.80.050. Such violations are Class 3 civil infractions.

SECTION 7: Injunctive Actions

7.1 In addition to any other penalty or method of enforcement, the Prosecuting Attorney may bring actions for injunctive or other relief to enforce this Article.

SECTION 8: Criminal Penalty

8.1 Any violation of this Article for which a criminal penalty is not prescribed by state law is a misdemeanor.

SECTION 9: Clean Up Responsibilities

9.1 Any person violating this Article shall, as directed by the compliance officer, collect, remove, contain, treat or disperse any materials discharged into surface water or ground water or onto the ground as a result of such violation. Any person violating this Article is responsible for the reasonable expenses incurred by the County including collection, removal, containment, treatment, laboratory testing of such materials.

9.2 The County may perform in-kind work or contract with qualified firms to perform said work. Bills for work performed shall be sent to the violator and payment required within thirty (30) days. If a bill is not paid within the required time, the County may take all appropriate measures to collect the amount due, including the bringing of legal action. Amounts not paid within the thirty (30) day period shall constitute a lien against the

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property on which such work has taken place and shall accrue interest at a rate of ____.

SECTION 10: Severability

10.1 If any provision of this Article or its application to any particular person or circumstance is held to be invalid, the remainder of this Code and its application to other persons or circumstances shall not be affected.

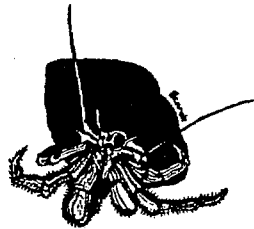
SECTION 11: Effective Date and Review Committee

11.1 This Article shall take effect 6 months after adoption.

11.2 This Article shall expire two years from the effective date. After the ordinance has been in effect for 18 months a Review Committee shall be convened by the Thurston County Board of Health to evaluate the ordinance, propose changes, and make recommendations regarding continuance of the ordinance.

11.4 The Review Committee shall present its findings and make recommendations to the Board of Health within three months of its first meeting.

Appendix 5



CHAPTER 20.36

ENVIRONMENTALLY SENSITIVE AREAS AND WETLAND FILL

Sections:

- 20.36.010 Purpose
- 20.36.020 Applicability
- 20.36.030 Review
- 20.36.040 Filling

20.36.010 Purpose. The purposes of this chapter are:

1. To protect environmentally sensitive areas by regulating their development.
2. To protect the general public from damage due to landslide, subsidence or erosion.
3. ~~To control siltation, protect nutrient reserves and maintain stream flows and stream quality for anadromous fish runs and~~ marine shellfish.
4. To protect natural flood control and storm water storage from alterations to drainage or stream flow patterns.
5. To safeguard migratory fowl, game animals and wildlife habitats.
6. To minimize turbidity and pollution of wetlands and fish bearing waters and to maintain wildlife habitat.
7. To protect the general public against avoidable losses from:
 - a. Maintenance and replacement of public facilities.
 - b. Property damage.
 - c. Subsidy cost of public mitigation of avoidable impacts.
 - d. Cost for public emergency rescue and relief operations.

8. To alert appraisers, assessors, owners, potential buyers and lessees of the natural limitations of the sensitive areas.
9. To protect unique, fragile and valuable elements of the environment.

20.36.020 Applicability. This chapter shall apply to:

1. Areas identified as being environmentally sensitive in the Comprehensive Plan (including sub-area plans).
2. Wetlands, marshes, bogs and swamps over one (1) acre in size. "Wetlands" means those areas that are inundated or saturated by ground or surface water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.
3. Geologic hazard areas, meaning those areas subject to a severe risk of landslide, due to the combination of:
 - a. Slopes greater than fifteen (15) percent.
 - b. Impermeable subsurface material (typically silt and clay), sometimes interbedded with permeable subsurface material (predominantly wet sand and gravel) between the top and base (foot) elevations.
 - c. Characterized by springs or seeping ground water during the wet season (November to February). These areas include both active and currently inactive slides.
4. Critical wildlife habitat areas, meaning those areas which provide either valuable feeding, nesting, breeding or resident sites for endangered or threatened species as identified by the U. S. Department of Interior or the Washington State Department of Game.
5. Anadromous fish rearing habitat.

6. Areas adjacent to marine bluffs along all shorelines of Puget Sound, including the west slope of Nisqually Delta above McAllister Creek between Nisqually Head and McAllister Springs, for a distance inland of two hundred (200) feet from the upland boundary of the mapped areas cited in subsection "a" below, or for the other slopes cited in subsection "b" below, two hundred (200) feet measured on a horizontal plane from the ordinary high-water mark; and where the following bluff conditions exist:
 - a. The slope is identified as "unstable" or "intermediate stability" on the maps of the Coastal Zone Atlas of Washington, Volume 8, Thurston County, prepared by Washington State Department of Ecology. (For areas not mapped by this source, refer to Class 2, 3 and 4 slopes on Slope Stability Map, Thurston County--Geologic Map GM-15, prepared by Washington State Department of Natural Resources).
 - b. Other slopes where the vertical height of the bank is in excess of twenty (20) feet.
7. Upper Reach Management Unit of the Percival Creek Corridor Plan, Volume II. This area is designated as the Upper Reach Management Unit on the map entitled "Upper Reach Corridor Map," a copy of which shall be on file in the Planning Department. This map is adopted as a part of Title 20 of the Thurston County Code insofar as it indicates the Upper Reach Management Unit. (Ordinance No. 8672, 7/6/87)
8. The Summit Lake Special Management Area shall include all lands which drain into Summit Lake (e.g. Summit Lake Watershed). This area is located on the map entitled "Summit Lake Watershed" a copy of which shall be on file in the Planning Department and a reduced copy is attached as Figure 36-1. This map shall indicate the location of "shoreline lots" and "upland lots", both of which must abut Summit Lake Shore Road. (Ordinance No. 9532, 8/6/90)

20.36.030 Review.

1. In addition to meeting any other requirements of this Zoning Ordinance, developments requiring a County permit or approval which are located upon property subject to this chapter, including developments which require only the issuance of a building permit, shall be reviewed as provided in this chapter. Developments requiring a decision by the Hearings Examiner shall be reviewed for compliance with this chapter by the Hearings Examiner. All other developments shall be reviewed for compliance by the Planning Department. The review authority may approve, deny or condition approval of a proposed development.
2. For developments located in marine bluff areas defined by this chapter, the following requirements shall apply:
 - a. When Special Plans are Required. Plans as specified in "2.b" of this subsection shall be required when the following conditions exist:
 - (1) Surface water runoff is toward the bluff; or
 - (2) Proposed structures, sanitary waste systems, or removal of existing vegetation are within a 2:1 slope from the toe of the bluff. A 2:1 slope means a slope having a ratio of two (2) horizontal feet to one (1) vertical foot.
 - b. Required Plans. If the conditions named in "2.a" above exist, the following special plans shall be submitted prior to issuance of any County permit or approval, and implemented by the applicant if the permit is issued:
 - (1) Land Development Plan. This plan shall describe soils, topography (including that of the marine bluff), existing vegetation, the areas to be cleared and graded, including any proposed view corridors, the location of major cuts and fills, proposed buildings, driveways, marine bulkheads, septic, water supply and stormwater management systems, anticipated schedule of development and vegetation replantings, and the proposed measures and site management practices for controlling erosion/sedimentation and runoff.

- (2) Drainage Plan. This plan shall be prepared by a licensed civil engineer and include temporary erosion and sedimentation control to be undertaken during construction, as well as permanent surface drainage systems showing all impervious surfaces and the system for drainage control. The contents of the drainage plans shall comply with the requirements of 20.35.080(4). Also applicable are the mandatory requirements of drainage improvements prescribed by 20.35.080(5).
 - (3) Septic System Plan. This shall be the septic system plan prepared for submittal to the Thurston County Health Department for the specific building project under consideration.
- c. Waiver of Required Plans. For permits or approvals involving minor changes, alterations or additions to developed properties, some or all of the above plans may be waived by the County review authority if the scale and the nature of the proposed project or activity will not effect surface water runoff or ground water.
- d. Review of Required Plans
- (1) Clearing, grading and other construction activities shall not aggravate or result in slope instability or surface sloughing.
 - (2) There shall be minimum disturbance of trees and vegetation in order to minimize erosion and stabilize bluffs.
 - (3) Vegetation removal on the slopes of banks between the ordinary high-water mark and the top of the bank shall be minimized due to the potential for erosion. Selective tree removal on a limited basis may be appropriate to allow a view corridor to the water; however, thinning of limbs of individual trees is a preferred alternative.
 - (4) No fill, dead vegetation (slash), or other foreign material shall be placed between the ordinary high-water mark and the top of the bank.

- (5) Structure foundations shall be placed below or beyond the 2:1 slope line unless a soil engineering report prepared by a licensed civil engineer indicates such a system will not affect slope stability.
 - (6) Regardless of Section 20.35.080(5)(a), surface drainage down the face of the bluff should be avoided. If drainage must be discharged from the bluff into Puget Sound (or McAllister Creek in the case of Nisqually Delta bluff), it should be collected above the face of the bluff and directed to Puget Sound (or McAllister Creek) by tight line drain and provided with an energy dissipating device at the shoreline. The number of drain outlets should be minimized along any bluff frontage.
 - (7) Surface drainage (including downspouts) that is directed away from the bluff face should be collected in a tight line drain (or other approved methods) for discharge to an acceptable natural drainage. If necessary, the drain should terminate at the end of the drainage course rather than at a point within the natural drainage course.
 - (8) Regardless of Section 20.35.080(5)(c), stormwater retention and detention systems, including percolation systems utilizing buried pipe or french drain, are strongly discouraged unless such systems are designed by a licensed civil engineer and a soil engineering report or engineering geology report indicates such a system will not affect slope stability.
 - (9) In addition to normal Health Department drainfield requirements, placement of drainfields shall be outside of the 2:1 slope from bluff toe, unless otherwise justified by a licensed civil engineer.
3. When reviewing a development proposal, the review authority shall consider information relevant to achieving the purposes of this chapter, and shall consider, where applicable, at least the following:
- a. Soil and/or geologic limitations for on-site sewage disposal, roads or any other construction.
 - b. Natural drainage systems including marshes, bogs and waterways.

- c. Slopes and the effect of altering them as a result of construction or other intensive activity.
 - d. Water quality of surface waters and aquifers.
- 4. The review authority may require that certain tests and other analytical studies be made prior to approval of development proposals or the granting of building permits in order that any environmental impact can be evaluated; and may require that mitigating steps be taken prior to, during or after construction in order that adverse effects can be minimized or eliminated.

The developer shall pay for or reimburse the County for the costs incurred in the conduct of such tests or studies and for the costs incurred by the County to engage technical consultants for review and interpretation of data and findings submitted by or on behalf of the developer.

- 5. In addition to meeting the minimum standards of the underlying zone, the review authority may prescribe more restrictive:
 - a. Building and development coverage
 - b. Setbacks
 - c. Size of lots and development sites
 - d. Height limits
 - e. Density limits
 - f. Restoration of ground cover and vegetation
 - g. Or other measures for environmental protection.
- 6. Nothing contained herein shall be deemed to prevent the establishment or operation of commercial peat bogs.

7. In the Upper Reach Management Unit as defined in Section 20.36.020(7) a buffer of undisturbed native vegetation buffer at least 50 feet in width shall be retained adjacent to the associated wetlands of Black Lake. For the purposes of this section, "associated wetlands of Black Lake" includes any area designated as wetlands or associated wetlands by the State Department of Ecology pursuant to RCW 90.58.030(2)(f).
 - a. Existing structures or improvements which encroach into the required buffer area on the effective date of the implementing ordinance shall retain the existing buffer with no further clearing or habitat destruction.
 - b. The director of the Planning Department or his/her designee may reduce the wetland buffer when lots of record are less than two hundred (200) feet in depth from the front property line to the wetland edge. In this case, the buffer shall not be greater than fifty percent (50%) of parcel depth, but in no case reduced beyond twenty-five (25) feet. Further, in this case, a vegetation enhancement plan shall be provided and implemented for the wetland and/or its buffer.
 - c. Vegetation enhancement plans shall be designed to increase habitat or aquatic habitat by including riparian species similar to those listed in Suggestions for Stream Bank Revegetation in Western Washington (1980).
 - d. This section shall not apply to lands within: 1) the right of way of Black Lake Boulevard, OR 2) twenty-five (25) feet of any building, in existence at the time of this amendment. (Ordinance No. 8672, 7/6/87)
8. "Garages" as defined by the Uniform Building Code 1988, or as amended, may be constructed on upland lots identified on Figure 36-1 within the "Summit Lake Special Management Area" subject to the following standards:
 - a. The upland lot must be owned by a person who also owns a shoreline lot identified in Figure 36-1 and must have a residence on it.
 - b. In the case of a single family residence the garage shall be a single structure, one story in height, and no greater than 1800 square feet in size. In the case of a multi-family residence it shall also be a single structure, one story in height and limited to 500 square feet per multi-family unit.

- c. Uses within the garages shall be limited to those allowed by the Uniform Building Code, with the following uses expressly prohibited:
 - 1. Separate living unit,
 - 2. Family member unit
 - 3. Home Occupation, and
 - 4. Home Based Industry.
- d. All garages constructed on upland lots which lie directly across the road from the shoreline lot in common ownership or within 1 upland lot on either side (refer to Figure 36-2) shall meet the setback standards of the underlying zone.
- e. Garages constructed on any other upland lot shall meet the following standards:
 - 1. Obtain a Special Use Permit pursuant to Chapter 20.54, and
 - 2. The standards for garages with a Special Use Permit shall be as follows:
 - (A.) Meet the setback standards of the underlying zone,
 - (B.) Provide buffers of native vegetation (either existing or replanted) of 30 feet along the front property line and 20 feet along the side property line, with this buffer to be located on the upland lot and not within the right-of-way, (refer to Figure 36-3) and
 - (C.) Be compatible in design, color, shape, landscaping and size to surrounding upland garages or residences within 1/4 mile.

- f. A covenant shall be recorded with the titles of both the shoreline lot and the upland lot, prohibiting the sale of either lot separately. This covenant shall be substantially in the same form as Appendix 36-1. This covenant will be released by the Thurston County Planning Department when:
1. The upland garage is demolished, or
 2. The upland garage site has a contract to be sold for new residence and a building permit is part of the transaction, or
 3. The upland garage site is sold to another Summit Lake shoreline lot owner subject to the following standards and a new covenant is filed for those properties:
 - (A.) Those upland lots described in 20.36.030 (8)(d) above, may only be sold to a property owner for whom it would also meet those standards (refer to Figure 36-4), and
 - (B.) Those upland lots described in 20.36.030 (8)(e) above, may be sold to any other Summit Lake shoreline lot owner.
(Ordinance 9532, 8/6/90)

20.36.040 Filling.

1. Wetlands as defined by 20.36.020(2) may be filled for the purposes and in the manner described herein. All other filling of wetland is prohibited.
2. Filling in conjunction with a project otherwise requiring County permit approval shall be reviewed by the Planning Department prior to the issuance of the first permit so required. Other proposed filling shall be reviewed and approved in writing by the Planning Department.

3. Permitted Fill. Fills of the following kind are allowed after review and approval if no feasible alternative exists, provided that the fill will not be located in the proximity of a domestic or public water intake, it will not occur in areas of concentrated shellfish production, the fill will not destroy a threatened or endangered species or critical habitat of that species, the fill will consist of suitable material free from toxic pollutants in other than trace quantities.
 - a. Minor road crossing fills, provided that the crossing is culverted or bridged to prevent the restriction of expected high flows.
 - b. Fill places incidental to the construction bridges.
 - c. The repair, rehabilitation or replacement of any previously authorized, currently serviceable fill, provided that the fill has not or will not be put to uses differing from uses specified for it in any permit authorizing its original construction.
 - d. Utility line crossings.
 - e. Bank stabilization.
 - f. Emergency measures for the protection of human safety, health or welfare.
4. Erosion Control. Filling operations shall not result in any significant erosion or create any unstable land conditions.
5. Site Restoration. Disposal sites which have been completely filled shall be drained, tilled and planted within the time prescribed by the review authority. Restoration shall be performed in such a way as to produce a terrain of natural appearance.
6. Landfill Quality. Fill shall consist of clean materials that will not result in leaching of chemical or solid contaminants into water bodies.
7. Nothing contained herein shall be deemed to prevent filling in conjunction with public projects or uses of substantial public importance as determined by the Board of Thurston County Commissioners.

CHAPTER 20.35

STANDARDS RELATING TO PHYSICAL LIMITATIONS OF LAND

Sections:

- 20.35.010 Grounds for Disallowance of Development or Use
- 20.35.020 Drainage Study Required for Development
- 20.35.030 Soil Analysis Required--Slopes in Excess of Thirty Percent
- 20.35.035 Soil Analysis--Slopes Twenty to Thirty Percent
- 20.35.040 Extent of Land Clearing to be Shown
- 20.35.050 Clearing and Grading on Ravines with Water Flow--Drainage Easements
- 20.35.060 Grading of Banks Bordering Puget Sound
- 20.35.070 Protection of Open Space Land from Clearing and Grading
- 20.35.080 Storm Water Drainage

20.35.010 Grounds for Disallowance of Development or Use. No development or proposed use of land shall be allowed if there is evidence that its allowance would result in any one or more of the following:

1. The contamination of ground water resources.
2. Deterioration of water quality of streams below the standards set by the State Department of Ecology or unreasonable alteration of stream beds.
3. Damage to land or property resulting from changes in drainage patterns, increased water runoff or erosion.
4. Damage to land or property resulting from slippage of soils along the shoreline or along other steeply sloping land.
5. Damage to property or health hazard posed by inadequate sewage disposal.
6. Property damage resulting from building on land having a seasonably high water table.
7. Property damage resulting from building on soils subject to settling.

20.35.020 Drainage Study Required for Development. Each application requiring subdivision approval pursuant to Chapter 18.12 or site plan approval pursuant to Chapter 20.37 shall include an adequate study by a licensed civil engineer of existing and proposed drainage that indicates:

1. The existing drainage patterns.
2. Drainage exits from the property.
3. An estimate of storm runoff.
4. Anticipated effects of runoff of adjacent property.

20.35.030 Soil Analysis Required--Slopes in Excess of Thirty Percent. A geologic and soil survey and analysis, prepared by a licensed civil engineer, shall be required in order to determine foundation stability for all proposed uses of land on slopes exceeding thirty percent (30%). Where applicable, the survey and analysis shall be filed with the Planning Director at the same time as the application for a plat or site plan is filed. No building permit or sewage permit shall be issued on land having slopes in excess of thirty percent (30%), unless such a soil survey and analysis has also been filed with the Thurston County Building Department and the Thurston County Health Department.

20.35.035 Soil Analysis--Slopes Twenty to Thirty Percent. The Building Official may require a soil and geologic analysis as specified above on any proposed use of land on slopes of twenty percent (20%) to thirty percent (30%).

20.35.040 Extent of Land Clearing to be Shown. An applicant for preliminary plat approval pursuant to Chapter 18.12 or site plan review pursuant to Chapter 20.37 shall indicate in his application the extent to which the land in the development is to be cleared of trees or ground cover.

20.35.050 Clearing and Grading on Ravines with Water Flow--Drainage Easements. Clearing, grading, filling, construction or dumping of refuse or wastes shall not be permitted in or on ravines with year-round or seasonal water flow, except when necessary to preclude or retard erosion and when all required permits have been obtained. In order to maintain natural water flow, drainage easements shall be required in any development having such a ravine. Where drainage easements are required, maintenance shall be assured through covenants, homeowners' associations, bonds or such other means as the County Public Works Department shall approve.

20.35.060 Grading of Banks Bordering Puget Sound. No bank or ravine bordering on shorelines regulated by the Shoreline Master Program shall be graded and cut through (in any depth) for the purpose of constructing a road, path or other access to the water without providing a plan prepared by a licensed engineer that will assure the stability of the bank or ravine, except for roads constructed under the Forest Practices Act.

20.35.070 Protection of Open Space Land from Clearing and Grading. Soil, material or equipment shall not be moved across or through any area accepted as open space in accordance with Chapter 20.32 (Open Space) except for the purpose of placing underground utilities or as allowed under 20.32.040. Any areas disturbed for placement of utilities should be returned as nearly as possible to its natural condition. A building permit shall not be issued for building on any land abutting open space land, unless the applicant demonstrates to the satisfaction of the Building Department that he will comply with this Section.

20.35.080 Storm Water Drainage.

1. **Purpose.** The intent of this Section is to insure the public health, safety and welfare in a manner that is environmentally sound and appropriate to the district in which the proposed development is to take place. Furthermore, this Section is necessary in order to minimize water quality degradation and to prevent the sedimentation of creeks, streams, ponds, lakes and other water bodies; to protect property owners adjacent to developing land from increased runoff rates which are likely to cause erosion of abutting property; to preserve and enhance the suitability of waters for recreation and fishing; to preserve and enhance the aesthetic quality of the waters; to promote sound development practices which respect and preserve the natural drainageways; to insure the safety of county roads and rights-of-way; to decrease surface water damage to public and private

property; and to encourage innovation in the design of proposed developments that are both functional and attractive.

2. Submission of a Drainage Plan. All persons applying for any of the permits required by this Ordinance and noted in the district/use/site review standards as requiring a drainage plan, shall submit a drainage plan for approval with their application. It is recommended that before developing this plan that the applicant and/or his engineer contact the Public Works Department for any clarification they may need.
3. The plan requirements established in this Section will apply except when the applicant demonstrates to the satisfaction of the Public Works and Planning Departments that the proposed development and/or activity:
 - a. Will not significantly impact the water quality conditions of any affected receiving bodies of water.
 - b. Will not alter the drainage patterns, increase peak discharge, or cause adverse effects in the drainage area.
 - c. Will not significantly impact other properties or the drainage plans and facilities of adjacent land to be developed in the future.
4. Contents of a Drainage Plan. The drainage plan when required shall address surface and pertinent subsurface water flows entering, flowing within and leaving the subject property. The detailed form and contents of the drainage plan shall be described in the Compliance Manual. The procedures shall set forth the manner of presenting the following required information:
 - a. Engineering computations for sizing drainage facilities with an emphasis on requiring, wherever possible, the retaining of additional runoff generated on-site and reduction of peak flow to pre-development levels. These computations shall include: (1) depiction of the drainage area on a topographical map of a scale of one inch equal to fifty (50) feet and two (2) or five (5) foot contours as required, with acreage of the site, development and impervious areas indicated; (2) indication of the peak discharge and amount of surface water currently entering and leaving the subject property resulting from the design storm, indication of the peak discharge and amount of runoff resulting from the design storm which will be generated within the subject property after development is completed.

- b. Requirements of this paragraph may be modified at the discretion of the Public Works Department in special cases requiring more or less information according to the specifications included in the Compliance Manual.

5. Mandatory Requirements for Drainage Improvements. The following are required considerations for drainage plans submitted pursuant to this Ordinance:

- a. Surface water entering the subject property shall be received at the naturally occurring location, and surface water exiting the subject property shall be discharged at the natural location with adequate storage capacity within the subject property to minimize downstream damage from increased peak flows.
- b. The natural peak discharge and runoff volume from the subject property due to the design storm may not be increased as a result of the proposed development.
- c. Retention/detention facilities must be provided in order to handle all surface water in excess of the allowable pre-development peak discharge.
- d. Where open ditch construction is used to handle drainage within the development, a minimum of fifteen (15) feet shall be provided between any structures and the top of the bank of the defined channel.
 - (1) In open channel work the water surface elevation will be indicated on the plan and profile drawings. The configuration of the finished grades constituting the banks of the open channel shall also be shown on the drawings.
 - (2) Proposed cross section of the channel shall be shown with stable side slopes as approved by the Public Works Department. Side slopes shall be 3:1 maximum unless stabilized in some other manner approved by the Public Works Department.
 - (3) The water surface elevation of the flow for the design storm shall be indicated on the cross section.

e. When a closed system is used to handle drainage within the development, all structures shall be a minimum of ten (10) feet from the closed system.

(1) Variances from any of the foregoing requirements of this paragraph may be permitted only after a determination by the Public Works Department employing the following criteria: sufficient capacity under design conditions of downstream facilities; maintenance of the integrity of the receiving waters; possibility of adverse effects of retention/detention; utility of regional retention/detention facilities; capability of maintenance of the system; and structural integrity of abutting foundations and structures.

6. Development in Critical Flood Drainage and/or Erosion Areas. Development which would increase the volume of discharge due to any storm from the subject property shall not be permitted in areas where existing flooding, drainage, erosion, and/or instability conditions present an imminent likelihood of harm to the welfare and safety of the surrounding community, or to the integrity of the surface or ground water system until such time as the existing community hazard is alleviated and it is adequately demonstrated that the proposed development will not cause a recurrence of the problem nor the occurrence of any new problem.

7. Review and Approval of the Plan. All storm drainage plans prepared in connection with any of the permits and/or approvals required by this Ordinance shall be submitted for review and approval by the Public Works Department.

8. Bonds and Liability Insurance Required. All persons constructing retention/detention or other drainage treatment/abatement facilities are required to post surety and cash bonds.

Where such persons have previously posted, or are required to post, other such bonds on the facility itself or on other construction related to the facility, such person may, with the permission of the Public Works Director and to the extent allowable by law, combine all such bonds into a single bond, provided that at no time shall the amount thus bonded be less than the total amount which would have been required in the form of separate bonds, and provided further that such a bond shall on its face clearly delineate those separate bonds which it is intended to replace.

- a. Construction Bond. Prior to commencing construction, the person constructing the facility shall post a construction bond in an amount sufficient to cover the cost of conforming said construction with the approved drainage plans. The amount of the bond shall be increased at one (1) year intervals in a proportion equivalent to the prevailing rate of inflation in construction costs. After determination by the Public Works Director that all facilities are constructed in compliance with the approved plans, the construction bond shall be released. Alternatively, equivalent cash deposit to an escrow account administered by a local bank designated by the County may be required at the County's option.
 - b. Maintenance Bond. After satisfactory completion of the facilities and release of the construction bond by the County, the developer shall commence a two (2) year period of satisfactory maintenance of the facility. A cash bond to be used at the discretion of the Public Works Director to correct deficiencies in maintenance affecting public health, safety and welfare shall be posted and maintained throughout the two (2) year maintenance period. The amount of cash bond shall be determined by the Public Works Director, but shall not be in excess of twenty-five (25) percent nor less than fifteen (15) percent of the estimated construction cost of the drainage facilities. In addition, a surety bond or cash bond to cover the cost of design defects or failures in workmanship of the facilities shall also be posted and maintained throughout the two (2) year maintenance period. Alternatively, an equivalent cash deposit to an escrow account administered by a local bank designated by the County could be required at the County's option.
9. Applicability to Government Entities. All municipal corporations and governmental entities shall be required to submit a drainage plan and comply with the terms of this Section when developing and/or improving land (just as private applicants would).
10. Drainage Control During Construction. Erosion and drainage control during construction may be required by the Public Works Director.

CHAPTER 20.23

McALLISTER GEOLOGICALLY SENSITIVE AREA DISTRICT

(Ordinance No. 9707, 01/29/91)

Sections:

- 20.23.010 Purpose
- 20.23.020 Primary Uses
- 20.23.025 Special Uses
- 20.23.030 Design Standards
- 20.23.040 Additional Regulations

20.23.010 Purpose. The purpose of this district is to provide for residential, commercial, and agricultural uses of a type and density which will minimize the potential for contamination or significant loss in recharge capacity of a vulnerable groundwater aquifer and potable water source of great importance to the general public. This exercise of the police power (regulatory power) is necessary to preserve the public health, safety, and welfare.

20.23.020 Primary Uses. Subject to the provisions of this title, the following uses are permitted in this district:

1. Group A. The following uses are permitted subject to staff review:
 - a. Single-family residential.
 - b. Agricultural uses conducted in compliance with a farm plan developed in conformance with U.S. Soil Conservation Service guidelines and the provisions of the Report to the Thurston County Board of Health on Best Management Practices for the Use of Pesticides and Fertilizers in the McAllister Spring GSA, Thurston County Environmental Health, 1989.

- (3) Carpet and upholstery cleaning businesses; and
- (4) Pest control businesses.
- b. The following Home Occupations:
 - (1) Dentists' and physicians' offices; and
 - (2) Barbershops and beauty parlors.
- c. All Major Energy Transmission and Generating Facilities, except electrical transmission lines and substations.

20.23.030 Design Standards.

1. Density:

- a. Sites contained within the Short Term Urban Growth Boundary may be developed at a maximum overall density of two (2) units per acre contingent upon connection to public sewer and provision of approved stormwater facilities.
- b. Sites outside of the Short Term Urban Growth Boundary and sites within this boundary without sewer and stormwater facilities may be developed at a maximum overall density of one (1) unit per five (5) acres.

		<u>Within Short Term</u>	
2. Minimum lot size:		<u>Boundary With Sewer</u>	<u>All Other Areas</u>
a.	Conventional subdivision lot	12,500 square feet	5 acres
b.	Cluster subdivision lot	7,200 square feet	12,500 square feet
c.	Two-family residential lot	25,000 square feet	
d.	Two-family clustered residential lot	14,400 square feet	

3. Minimum lot width:

a. Conventional subdivision lot:

- (1) Interior lot: 75 feet on lots of less than 5 acres, 300 feet on lots of 5 acres or more.
- (2) Corner lot: 100 feet on lots of less than 5 acres, 300 feet on lots of 5 acres or more.

b. Cluster subdivision lot:

- (1) Interior lot: 50 feet.
- (2) Corner lot: 75 feet.

c. Cul-de-sac: 35 feet.

d. Flag lot: 20 feet.

4. Maximum building height: 35 feet.

5. Minimum yard requirements:

a. Residential uses:

- (1) Front yard: 50 feet to centerline, except 60 feet to centerline of arterials.
- (2) Side yard: 5 feet.
- (3) Rear yard: 10 feet.

b. All other structures shall have minimum yards in accordance with Chapter 20.07.030.

6. Maximum lot coverage by impervious surfaces:
 - a. Parcels of 5 acres or greater: 5%.
 - b. Lots and parcels of less than 5 acres: 60% or 10,000 square feet, whichever is less.
7. Dedication of open space:
 - a. Land which is divided must conform to the open space dedication requirements of Chapter 18.47 of the Subdivision Ordinance.
 - b. Land developed as a special use under Chapter 20.54, must dedicate ten (10) percent to open space per the standards of Chapter 20.32.
 - c. That portion or tract of a cluster subdivision not occupied by individual building lots shall be permanently dedicated to community open space or forestry, except as required in a. or b., above.
 - d. Agricultural activities as defined in Section 20.03.040 of this code, with the exception of forestry, are not permitted in the dedicated open space.

20.23.040 Additional Regulations. Refer to the following chapters for provisions which may qualify or supplement the regulations presented above:

- | | | |
|----|---------------|---|
| 1. | Chapter 20.32 | Open Space |
| 2. | Chapter 20.34 | Accessory Uses |
| 3. | Chapter 20.35 | Standards Relating to Physical Limitation of Land |
| 4. | Chapter 20.36 | Environmentally Sensitive Areas |
| 5. | Chapter 20.40 | Signs and Lighting |
| 6. | Chapter 20.44 | Parking and Loading |
| 7. | Chapter 20.45 | Landscaping and Screening. |

Appendix 6



VIII. RURAL ENVIRONMENT.

9.180.010 Purpose.

9.180.020 Developments or Uses Permitted.

XIII. DENSITY, SITE COVERAGE, AND AQUATIC BUFFERS.

9.210.010 Purpose.

9.210.020 Basic Density.

9.210.030 Open Space Density.

9.210.040 Bonus Density.

9.210.045 Increased Density in the Sensitive Watershed Environment.

9.210.050 Transfer of Residential Development Rights.

9.210.060 Site Coverage.

9.210.065 Aquatic Buffers in the Sensitive Watershed Environment.

9.210.070 General Requirements.

XV. PERFORMANCE STANDARDS - OPEN SPACE AND BONUS AMENITIES.

9.230.010 Purpose.

9.230.020 General Criteria.

9.230.030 Open Space Density.

9.230.040 Bonus Density.

9.230.050 Performance Standards - Buffers and Screening.

9.230.060 Administrative Requirements.

VIII.

RURAL ENVIRONMENT

Sections:

9.180.010 Purpose.

9.180.020 Developments or Uses Permitted.

9.180.010 Purpose.

In the furtherance of the Comprehensive Plan, the purposes of the Rural Environment is to protect and preserve the rural character of an area; to protect rural, agricultural land from urban-suburban sprawl; to form relatively natural perimeters around more densely settled communities creating a sense of identity; to protect aquifer recharge areas from substantial impairment and pollution; to promote vegetative growth for its beneficial attributes of air purification, climate stabilization, aesthetic appeal, noise and sight buffers, recreational opportunities; bird and other wildlife habitats including migratory patterns; to promote the retention of land best suited

for agricultural and forestry production.

9.180.020 Developments or Uses Permitted.

Developments or uses permitted in this environment are divided into three categories as follows: A. Developments or uses permitted outright; B. Developments or uses permitted after administrative review and approval of a site plan by the Planning Department; and C. Developments or uses permitted after review and approval of a site plan by the Examiner after at least one public hearing.

Developments or uses permitted outright are those uses which have been determined to have only an insignificant impact upon the environment, the immediate neighborhood or the community. The Planning Department shall approve a site plan when it is determined that the requirements of this Regulation have been met or shall deny or refer to the Examiner any site plan which does not comply with the provisions of this Regulation.

A. Developments or uses permitted outright are as follows:

1. One family dwellings (not requiring a variance) which are not located wholly or partially within "Shorelines of the State" or within in "sensitive area" as defined by WAC 173-34-020(2) and which are proposed to be located on a lot of record or a lot which existed as such on the effective date of this Regulation which subdivision was approved pursuant to the site plan review process herein specified.
2. Duplex dwellings which do not require a variance which are proposed to be located on a lot designed and approved for a two-family dwelling on or before June 30, 1975.
3. Agriculture. Any agricultural use which is capable of operating within the air, noise and water pollution standards of this Regulation, as well as applicable State and Federal Regulations.
4. Raising, slaughtering and dressing of livestock, small animals and poultry. The raising, slaughtering and dressing of livestock, poultry and small animals for commercial purposes; provided that no building, cage or pen housing or feeding such animals shall be located closer than forty-five (45) feet to any boundary property line.
5. Accessory buildings and structures related to outright permitted uses as determined by the Planning Department in conformance with the intent of the Plan.
6. Changes in occupancy to existing commercial or industrial buildings or uses provided that the new use is of an intensity equal to or less than the former use.

~~The growing and harvesting of timber, forest products and associated management activities in accordance with the Washington Forest Practices Act of 1974 is amended, and regulations adopted pursuant thereto.~~

EXHIBIT A TO _____

B. Developments or uses permitted after review and approval of a site plan by the Planning Department are as follows:

~~1. Planned residential developments including apartment housing, garden apartments, townhouses, condominiums, row or cluster housing, including customary accessory uses and structures and other similar housing concepts, but excluding any housing or housing on individual lots within a subdivision or short subdivision which requires a variance and further, excluding projects containing more than four (4) dwelling units or projects requiring a variance. Persons owning or developing adjacent property who seek a similar request within a period of two (2) years and are in some way directly or indirectly connected with or are the original applicant must go through the hearing process.~~

21. Duplex dwellings upon lots of record established by legal subdivision after June 30, 1975.

32. Structural changes or alterations to an existing commercial or industrial use, provided the changes and alterations will bring the use or building into greater conformity with the intent of this Regulation. The Planning Department may waive site plan approval in any instance where the change or alteration would have an insignificant impact.

3. Public schools, libraries, or fire stations.

4. Other public facilities and uses, including both new and changes to existing facilities, except those which require an environmental impact statement.

~~5. Any use or activity proposed immediately adjacent to the Natural or Conservancy Historic Environments which would, in the opinion of the Planning Department, have a potential impact upon the adjacent environment.~~

65. Short plats and large lot subdivisions.

76. One family dwellings located wholly or partially within "Shorelines of the State" unless located wholly or partially within a "sensitive area" as defined by WAC 173-34-020(2).

C. Developments or uses permitted after review and approval of a site plan by the Examiner after at least one public hearing are as follows:

1. Subdivisions of land except short plats and large lot subdivisions.

~~1. Any use or activity which requires a public hearing or public meeting according to any other law, ordinance, regulation or code. In the event any use or activity requires approval over and beyond the requirements of this Regulation and the Examiner has the authority to review the matter under the other regulations or Code, the Examiner may consider the separate applications concurrently, but action shall be taken upon each matter separately. This Section shall be applicable, but not necessarily limited to, subdivisions and shoreline~~

substantial development permits.

2. Any use or building located wholly or partially within a "sensitive area" as defined by WAC 173-34-020(2), except one family dwellings which are proposed to be located wholly or partially within "Shorelines of the State."

3. Any other use, building, structure or activity excluding youth cabarets but including new and changes to existing uses not covered under Subsection A. above provided the use, building, structure or activity complies with the intent of the Comprehensive Plan, this Chapter and pertinent density and other performance standards of this Regulation; provided further, the commercial, multiple dwelling structures, or industrial uses must be consistent with the rural surroundings, the immediate neighborhood and further provided non-residential developments shall not be of a substantial nature (e.g., large scale shopping centers).

4. Public facilities and uses, including both new and changes to existing facilities, for which an environmental impact statement has been required.

XIII.

DENSITY, SITE COVERAGE AND AQUATIC BUFFERS

Sections:

- 9.210.010 Purpose.
- 9.210.020 Basic Density.
- 9.210.030 Open Space Density.
- 9.210.040 Bonus Density.
- 9.210.045 Increased Density in the Sensitive Watershed Environment.
- 9.210.050 Transfer of Residential Development Rights.
- 9.210.060 Site Coverage.
- 9.210.065 Aquatic Buffers in the Sensitive Watershed Environment.
- 9.210.070 General Requirements.

9.210.010 Purpose.

In furtherance of the Comprehensive Plan, this Chapter is intended to establish:

- A. The parameters for the number of dwelling units that may be permitted on a given tract of land within a particular environment.
- B. Criteria by which minimum dwelling unit density may be exceeded within each environment in terms of "open space density," "bonus density," "increased density in the Sensitive Watershed Environment," and "transfer of residential development rights."
- C. Maximum amounts of land on a given site which may be covered by impervious surfaces.
- D. Aquatic Buffer widths and requirements in the Sensitive

EXHIBIT A TO _____

Watershed Environment.

9.210.020 Basic Density.

The basic density is the minimum allowable residential building site land area in terms of dwelling units per acre which is permitted in a designated environment; provided however, the density of developable land sites may be increased by taking advantage of the provisions for open space density, bonus density, increased density in the Sensitive Watershed Environment, or transfer of development rights herein specified. In the Urban Environment, low density residential development is not encouraged, therefore, no basic density is assigned to the Urban Environment. Commercial development in the Urban and other environments is controlled primarily by the site coverage limitations herein. Commercial/industrial development is prohibited in the Rural Environment and the Residential and Rural Sub-areas of the Sensitive Watershed Environment. Except as otherwise provided in Part IV. of these Regulations and in this Chapter, the minimum average lot area for each dwelling unit shall be as follows:

- A. Urban Environmentnot applicable
- B. Residential Environment.....one acre
- C. Rural Environment.....two acres

1. Rural Basic (Refer to Comprehensive Plan Map)

- Option 1 - three acres
- Option 2 - two acres with twenty-five percent (25%) or more of land in contiguous open space
- Option 3 - one acre with fifty percent (50%) or more of land in contiguous open space

2. Rural Special (Refer to Comprehensive Plan Map) - five acres

- D. Rural-Residential Environment.....one acre*
- E. Conservancy-Historic Environment.....two acres
- F. Natural Environment.....two acres
- G. Sensitive Watershed Environment:
 - 1. Urban Sub-Area.....one acre
 - 2. Residential Sub-Area.....one acre
 - 3. Rural Sub-Area.....two acres

* New lots created contiguous to the saltwater shorelines shall have a minimum of 12,500 square feet with a minimum of 70 feet shoreline frontage and shall also be in compliance with density provisions found in the Shoreline Management Use Regulations for Pierce County, Chapter 20.62.

9.210.030 Open Space Density.

Pursuant to the following provisions, the basic density in all environments except the Rural, Rural-Residential, Conservancy-Historic, Natural, and Sensitive Watershed Environments, may be increased for any residential development which provides open

space in accordance with the provisions of this Regulation, including, but not limited to, the provisions of Part XIV of this Regulation. The actual number of dwelling units permitted under this Section shall be determined according to the ratio of buildable land allocated for open space purposes to the gross acreage of land. An applicant desiring to use the "open space density" provisions of this Section shall follow the site plan approval procedures as set forth in these Regulations.

Lot sizes within any development are not required to be of a uniform size, thus for purposes of computing the density the words "average number of dwelling units per acre" is utilized. Subject to all other relevant provisions of this Chapter, the number of dwelling units allowable shall be determined in each environment according to the following formulas:

A. Urban: The average number of dwelling units per acre (i.e., density) shall not exceed the product of thirty multiplied by a fraction; the numerator of which is the amount of acreage allocated as open space and the denominator of which is the gross acreage:

$$\text{Density (dwelling units/acre)} = \frac{30 \times \text{number of acres allocated as open space}}{\text{Gross Acreage}}$$

B. Residential: The average number of dwelling units per acre (i.e., density) shall not exceed the product of fifteen multiplied by a fraction; the numerator of which is the amount of acreage allocated as open space and the denominator of which is the gross acreage:

$$\text{Density (dwelling units/acre)} = \frac{15 \times \text{number of acres allocated as open space}}{\text{Gross Acreage}}$$

~~C. Rural: Not applicable~~

~~C. Rural: The average number of dwelling units per acre (i.e., density) shall not exceed the product of five multiplied by a fraction; the numerator of which is the amount of acreage allocated as open space and the denominator of which is the gross acreage:~~

~~$$\text{Density (dwelling units/acre)} = \frac{5 \times \text{number of acres allocated as open space}}{\text{Gross Acreage}}$$~~

D. Rural-Residential: Not applicable.

E. Conservancy-Historic: Not applicable.

F. Natural: Not applicable.

G. Sensitive Watershed: Not applicable.

9.210.040 Bonus Density.

The density of any residential development, except developments in the Sensitive Watershed Environment, ~~Rural Environment~~, and the Rural-Residential Environment, may be increased up to, but not exceeding, twenty-five percent (25%) by following the

provisions of Section 9.230.040.

9.210.045 Increased Density in the Sensitive Watershed Environment.

The density of some residential developments in the Sensitive Watershed Environment may be increased by applying the provisions of Section 18.50.405 for a "Resource Protection Area." The density of some developments in the Sensitive Watershed Environment may also be increased by using the provisions in Section 18.50.420 for "Infill Densities in the Sensitive Watershed Environment." Residential projects may use one of the two measures listed above for increasing density. However, in no case may both provisions be used for the same project.

9.210.050 Transfer of Residential Development Rights.

This Section is specifically designed to implement the Gig Harbor Peninsula Comprehensive Plan by providing the means of achieving the goals and objectives of the Plan with reference to sensitive natural resources and physical features or designated cultural or historic sites located in the Rural-Residential, Natural, Conservancy-Historic, or Sensitive Watershed Environments, while providing compensation to owners of such land.

A. Definition. Residential development rights shall be considered real property and shall be subject to all legal requirements applicable to other real properties.

B. Eligibility. Any land designated in the Plan and/or Environment Map as Rural-Residential, Natural, Conservancy-Historic, or Sensitive Watershed which is undeveloped may be eligible, including historic sites and buildings.

C. Authorization. Pursuant to the purposes stated in this Section, the Examiner may from time to time authorize the transfer of residential development rights from one parcel of land in one of the eligible Environments cited above to another specific parcel of land located in ~~the Rural, Residential,~~ or Urban Environments. Such an authorization shall be made only where it is found to be consistent with the intent of the Plan and these Regulations. The said transfer shall be in terms of density (i.e., dwelling units/acre).

D. Procedures. The following procedures shall be followed when residential development rights are to be transferred from one parcel to another:

1. An applicant for the transfer of residential development rights shall present documentation satisfactory to the Planning Department indicating the following:

a. The location, site area and related residential development rights permitted under the applicable provisions of these which the applicant proposes to transfer.

b. The location and site area of the site to which such rights are to be transferred, the projected total number of dwelling units which would result from such a transfer, the regulating density and the change in density.

c. A presentation as to the reasonable and beneficial results anticipated from the authorization applied for with respect to the implementation of the Plan.

2. When the completed application (as determined by the Planning Department) is transmitted to the Examiner, he shall proceed in the consideration of all aspects of the proposal, particularly that of the degree to which the proposal would implement the Plan. The Planning Department shall submit its findings and recommendations to the Examiner along with any pertinent information for his consideration. The recommendations of any ex-officio successor to the Citizens' Advisory Committee shall also be considered.

3. The consideration of the proposal by the Examiner shall be accomplished at a public hearing following procedures for site plan review set forth elsewhere in these Regulations; provided, that notice shall be sent to all landowners within three hundred feet of the two sites involved.

4. Upon favorable review by the Examiner, such an application shall be approved subject to completion of the following actions:

a. Execution of an instrument legally sufficient to effect such a transfer and (1) the retention of the fee title with deed restrictions reflecting the transfer and its conditions in private ownership, or (2) a transmittal with similar restrictions to the County or other such public agency approved by the Examiner for use as permanent open space. A deed for the residential development rights shall be assigned an Assessor's parcel number and shall include a legal description of the real property from which said residential development rights are to be transferred and a legal description of the real property to which such rights are to be transferred and shall be accompanied by the assigned Assessor's parcel number;

b. Filing copies of the executed legal instruments required above with the offices of the Auditor, Assessor-Treasurer, Planning Department and the Building Department as notice of such transfers of residential development rights;

c. Such other requirements as the Planning Department shall establish in conformance with the intent of the Comprehensive Plan.

E. Limitations. All transfer proposals shall be limited as follows:

When proposed for transfer to the applicable environment, the resulting density shall not exceed the stated limitations as follows:

1. Urban.....nineteen dwelling units per acre
2. Residential.....nine dwelling units per acre
- ~~3. Rural.....five dwelling units per acre~~

For the purpose of the transfer of residential development rights only, a transferable density shall be assigned from the

Rural-Residential, Natural, Conservancy-Historic, and/or Sensitive Watershed Environments; this transferable density shall be not more than three dwelling units per acre of Rural-Residential, Natural, Conservancy-Historic, and/or Sensitive Watershed Environments. The number of dwelling units per acre shall be determined by the reviewing authority based on the quality of the TDR as it implements the Comprehensive Plan.

9.210.060 Site Coverage.

The provisions of this Section shall be used to determine the percentages of any development site which may be covered by buildings, structures, roads, streets or other areas for parking or driving of motor vehicles, whether paved or unpaved, or by pavements, roofs, or other IMPERVIOUS COVER. Furthermore, this Section provides that the nature of the remaining site area shall be specified.

In the event transfer of development rights is utilized, the person selling such rights, (or his successor), may increase the permitted site coverage for his adjoining land (to the limit permitted herein for the area of land from which the transferred rights were sold); provided, that such increase shall not be permitted to be greater than that allowed in Subsection 9.210.060B.

The site coverage amount permitted shall be calculated for the total development including open space areas and Resource Protection Areas and if more than one lot is involved then each lot shall be assigned a permitted site coverage area, (but uniformity in coverage is not required), and the plat or short plat covenant shall specify this limitation.

A. Basic Maximum. For any one-family or two-family residential development or for any one-family or two-family residential portion of a development, the following figures constitute the maximum percentages of IMPERVIOUS COVER permitted for each environment:

1. Urban.....Fifty percent (provided that a twelve (12) foot wide driveway is exempt but not any additional parking area).
2. Residential.....Thirty-five percent (provided that a twelve (12) foot wide driveway is exempt but not any additional parking area).
3. Rural.....Twenty-five percent (provided that a twelve (12) foot wide driveway is exempt but not any additional parking area).
4. Rural-Residential.....Twenty-five percent (provided that a twelve (12) foot wide driveway is exempt but not any additional parking area).
5. Conservancy-Historic..Fifteen percent (may be waived in conjunction with historic preservation if consistent with the Comprehensive Plan); (provided that a twelve (12)

- 1 foot wide driveway is exempt
2 but not any additional parking
3 area).
- 4 6. Natural.....Five percent (provided that a
5 twelve (12) foot wide driveway
6 is exempt but not any
7 additional parking area).
- 8 7. Sensitive Watershed...Twenty-five percent (provided
9 that a twelve (12) foot wide
10 driveway is exempt but not any
11 additional parking area).
- 12 B. Increases Permitted. For all nonresidential developments
13 and multiple dwellings, the lower figure below which follows
14 the Environment designation shall be the applicable maximum
15 percentages of IMPERVIOUS COVER; however, an increase of up to
16 the higher percentage number will be permitted if the standards
17 set forth herein are satisfied:
- 18 1. Urban.....Fifty to eighty-five percent
19 2. Residential.....Thirty to sixty percent
20 ~~3. Rural.....Twenty-five to forty-five percent~~
21 4. Rural-Residential....Twenty-five to thirty percent
22 5. Conservancy-Historic..Fifteen to twenty percent
23 (may be waived in conjunction
24 with
25 historic preservation if
26 consistent with the
27 Comprehensive
28 Plan).
- 29 6. Natural.....Five percent
30 7. Sensitive Watershed:
- 31 a. Urban Sub-Area.....Twenty-five to sixty
32 percent
33 b. Residential Sub-Area.....Twenty-five percent
34 c. Rural Sub-Area.....Twenty-five percent
- 35 C. One or more of the following amenities and facilities may
36 allow the applicant to be eligible for increasing the
37 percentages of IMPERVIOUS COVER as explained in B. above in all
38 environments except Sensitive Watershed, but only when
39 consistent with the intent of the Comprehensive Plan:
- 40 1. Use of retention ponds, natural swales, porous
41 paving or other innovations to minimize or eliminate
42 storm water runoff of a rate exceeding the rate produced
43 by a ten (10) year flood flow rate may qualify for an
44 increase in IMPERVIOUS COVER up to a maximum increase of
45 an additional 10 percentage points of a given
46 environment;
- 47 2. Preservation of unique natural or historic features
48 as encouraged in the Plan may qualify for up to a
49 maximum increase of impervious cover of ten percent
50 (10%);
- 51 3. The applicant may be eligible for up to fifteen
52 percent (15%) of the MAXIMUM ALLOWABLE INCREASE IN
53 IMPERVIOUS COVER resulting from a subjective review of a
54 landscaping plan, up to fifteen percent (15%) of the
55 MAXIMUM ALLOWABLE INCREASE IN IMPERVIOUS COVER resulting
56 from an architectural review plan, or up to the MAXIMUM

1 ALLOWABLE INCREASE IN IMPERVIOUS COVER for both. In the
2 PAC report to the Hearing Examiner, it may make special
3 note of these aspects of the plan under the categories
4 of: (1) Reasons why the proposed development does comply
5 with the intent of the Comprehensive Plan; and (2)
6 Identification of specific positive aspects of proposed
7 development. Specific characteristics to be considered
8 are:

9 a. A landscaping plan that uses unity and balance
10 to blend with and enhance the visual characteristics
11 of the surrounding environment and existing or
12 planned neighboring structures. The landscaping
13 plan may provide for features such as raised and
14 planted berms to break up the visual monotony of
15 parking areas and large buildings.

16 b. An architectural review plan that provides for
17 either consistency and control within the proposed
18 development and with existing and planned
19 neighboring structures, or with an agreement to
20 submit to architectural controls not required
21 elsewhere in this Regulation. The architectural
22 review plan could provide for structures of
23 exemplary design which incorporate siting, color,
24 shape, and height restriction features that cause
25 the proposed development to be visually harmonious
26 with the environment and to meet prevailing
27 community standards.

28 c. Landscaping and architectural aspects of a
proposed development are critical elements in
meeting the intent of the Comprehensive Plan, in
preserving the existing environment, and in finding
community acceptance. The percentage increase in
the IMPERVIOUS COVER recommended to the Hearing
Examiner by the planning staff and the PAC will be
the result of subjective judgments based on their
knowledge, experience, and community standards.

4. Joint use of open space by several businesses or in
a community or neighborhood shopping facility so as to
create professionally designed and landscaped gathering
places for customers may qualify for up to the maximum
allowable percentage within a given environment;

5. Upgrading all nonconforming signage to current
standards within developments existing prior to June 30,
1975, may qualify for up to a maximum increase in
IMPERVIOUS COVER of ten (10) percentage points up to the
maximum allowable within each given environment;

6. Provision of other amenities and facilities of a
similar nature as determined by the Planning Department
or Examiner up to a maximum increase in IMPERVIOUS COVER
of ten (10) percentage points up to the maximum
allowable within each given environment; and

D. By providing for the following amenities, an applicant may
be eligible to increase the percentages of impervious cover as
explained in B. above for projects in the Sensitive Watershed
Urban Sub-Area, but only when consistent with the goals,

objectives, and policies of the Burley/Minter Drainage Basin Water Quality Plan:

1. By providing for a Resource Protection Area, as described in Section 18.50.405, the applicant may have the impervious cover for a project increased up to the maximum allowable percentage in the Sensitive Watershed Environment Urban Sub-Area. For every 1.14 square feet of Resource Protection Area provided, one square foot of additional impervious cover will be allowed, up to the maximum permitted percentage of impervious cover of 60%.

9.210.070 General Requirements.

Where this Chapter is utilized to increase permitted density, all of the following limitations and requirements shall be applicable:

A. Density Calculation Procedure. The total number of dwelling units permitted in a development shall be calculated as follows:

1. Maximum number of dwelling units. The maximum number of dwelling units permitted shall not exceed the product of the development's gross acreage multiplied by its calculated density rounded to the nearest whole dwelling unit.
2. Calculations. When utilizing the increased density provisions of this Chapter, one shall first calculate the open space density; next multiply the bonus density percentage plus one times the previous figure; and then to this number add the number of transferred dwelling units, when applicable.
3. Rounding off numbers. The density may be rounded off to the nearest tenth of a dwelling unit per acre only after all density calculations are made.
4. Required open space. If the applicant utilizes the bonus density and/or transferred development rights provisions herein, a minimum of fifteen percent of the site area shall be allocated for open space.

B. Maximum Allowable Density.

1. Open space maximum density. The maximum allowable density permitted utilizing the open space density provisions of this Chapter shall be as follows:

- a. Urban.....Sixteen dwelling units per acre
- b. Residential.....Six dwelling units per acre
- c. Rural.....~~Two dwelling units per acre~~ **Not applicable**
- d. Rural-Residential.....One dwelling unit per acre*
- e. Conservancy-Historic...One-half dwelling unit per acre
- f. Natural.....One-half dwelling unit per acre
- g. Sensitive Watershed....Not applicable

2. Total maximum density. The total maximum allowable density permitted utilizing transfer of residential development rights, open space density, and bonus density provisions of this Chapter, shall be as follows:

- a. Urban.....Nineteen dwelling units per acre
- b. Residential.....Nine dwelling units per acre

- 1 c. Rural.....~~Five dwelling units per acre~~~~Not~~
2 applicable
- 3 d. Rural-Residential.....One dwelling unit per acre*
- 4 e. Conservancy-Historic...One-half dwelling unit per acre
- 5 f. Natural.....One-half dwelling unit per acre
- 6 * 3.49 dwelling units per acre for lots created with saltwater
7 frontage or in conformance with density provisions found in
8 Section 20.62.040 of the Shoreline Management Use Regulations
9 for Pierce County.
- 10 g. Sensitive Watershed:
11 (1.) For one-family dwellings, two family
12 dwellings with more than two (2) bedrooms
13 per dwelling unit, and multiple-family
14 dwellings:...1.45 dwelling units per acre
15 (2.) For two-family dwellings with no more
16 than two (2) bedrooms per dwelling
17 unit:...2.1 dwelling units per acre
- 18 3. Maximum Allowable Density. The total maximum
19 allowable density permitted in the rural environment will be as
20 follows:
21 Rural Basic:
22 Option 1 - one dwelling unit per three acres with no
23 open space
24 Option 2 - one dwelling unit per two acres with twenty-
25 five percent (25%) land in open space
26 Option 3 - one dwelling unit per acre with fifty
27 percent (50%) land in open space
28 Rural Special.....one dwelling unit per five
acres
- C. Minimum lot sizes. Where the development involves the
subdivision of land into lots, the minimum building lot size
for one-family dwellings and duplexes within all environments
except the Sensitive Watershed Environment, shall be as
follows:
1. One-family dwelling with community water and sewer
systems:
Nine thousand square feet when serviced by both a
public or private community water system and a public or
private community sewer system or by a public or private
community water system and an approved interim sewer
system in conformance with the Plan.
Two-family dwelling with community water and sewer
systems:
Thirteen thousand five hundred square feet when
serviced as above specified for a one-family dwelling.
2. One-family dwelling utilizing individual on-site
sewage disposal:
The applicable provisions of WAC 248-96-090 and/or
Pierce County Health Department Regulations shall be
followed, provided, that the minimum lot size shall in
no event be smaller than twelve thousand five hundred
square feet.
Two-family dwelling utilizing individual on-site
sewage disposal:
The same provisions of 2. above shall apply, except
that a minimum lot size shall in no event be smaller

than eighteen thousand seven hundred fifty square feet.
D. Minimum lot sizes in the Sensitive Watershed Environment.
Where the development involves the subdivision of land into
lots, the minimum building lot size for one-family dwellings
and two-family dwellings within the Sensitive Watershed
Environment shall be as follows:

1. One-family dwellings:

Minimum lot size shall be determined by the amount of
Resource Protection Area, as described in Section
18.50.405 which is set aside within the development
project. Developments with less than thirty percent
(30%) of the total land devoted to Resource Protection
Area shall have minimum lot sizes of 30,000 square feet.
Developments with thirty percent (30%) or more of the
total land placed in a Resource Protection Area shall
have their minimum lot sizes determined by the
applicable Pierce County Health Department Regulations
for minimum lot sizes with on-site sewage disposal
systems. However, any lot which contains or is
contiguous to a stream or lake shown on the Sensitive
Watershed Stream Typing Atlas, or to Burley Lagoon or
Minter Bay, or to an associated wetland, shall have
minimum lot sizes as shown in Subsection 3. of this
Section below.

2. Two-family dwellings:

Minimum lot size shall be determined by the amount of
Resource Protection Area, as described in Section
18.50.405, which is set aside within the development
project. Two-family dwelling developments with less
than thirty percent (30%) of the total land devoted to
Resource Protection Area shall have minimum lot sizes of
42,000 square feet. Two-family dwelling developments
with thirty percent (30%) or more of the total land
placed in a Resource Protection Area shall have their
minimum lot sizes determined by the applicable Pierce
County Health Department Regulations for minimum lot
sizes with on-site sewage disposal systems. However,
any lot which contains or is contiguous to a stream or
lake shown on the Sensitive Watershed Stream Typing
Atlas, or to Burley Lagoon or Minter Bay, or to an
associated wetland, shall have minimum lot sizes as
shown in Subsection 3. of this Section below.

3. Any lot contiguous to a stream or lake shown in the
Sensitive Watershed Stream Typing Atlas, or to Burley
Lagoon or Minter Bay, or to an associated wetland, shall
have a minimum lot size of two (2) acres, and a minimum
width and depth of 200 feet.

XV.

PERFORMANCE STANDARDS - OPEN SPACE AND BONUS AMENITIES

Sections:

9.230.010 Purpose.

EXHIBIT A TO

9.230.020 General Criteria.

9.230.030 Open Space Density.

9.230.040 Bonus Density.

9.230.050 Performance Standards - Buffers and Screening.

9.230.060 Administrative Requirements.

9.230.010 Purpose.

The intent of this Chapter is to provide an explanation and working description of the use of open space, and to outline regulatory criteria for such use. These guidelines and standards are designed for evaluation of site plans as required by these regulations. Furthermore, they are intended to assist in the implementation of the goals and objectives contained in the Gig Harbor Peninsula Comprehensive Plan.

For purposes of this regulation, open space shall mean land used for recreation, resource protection, site utilities, safety or buffers, and is protected by the provisions of this regulation and the Subdivision and Short Plat Ordinance of Pierce County to insure that it remains in such uses. Open space shall be left in a substantially natural state except in the case of recreation or other approved uses that may contain limited impervious surfaces.

9.230.020 General Criteria.

The intent of the open space area(s) utilized in conjunction with these regulations must be designated clearly and graphically on a site plan. This designation shall specify one or more of the following intents:

A. Preservation of natural land, which has depth as well as breadth, in its natural state will be a primary use of open space.

B. Natural resource protection in order to maintain safety on steep slopes, maintain air or water quality, prevent erosion, save unique vegetation or wildlife habitats or maintain the agricultural character of the Peninsula.

C. Buffer divergent land use by providing areas for noise attenuation, visual screening, odor attenuation, view protection or privacy.

D. Site utility area for retention ponds, drainfields, wells and water storage structures.

E. Passive recreation areas for trails, viewpoints, and nature study.

F. Active recreation areas for playfields, tennis courts, picnic areas and other active related recreational uses.

9.230.030 Open Space Density.

An applicant desiring to use the open space density provisions of this Section may use the open space density calculations of the applicable environment, and shall follow the site plan approval procedures as set forth in these regulations. Pursuant to the following provisions, the Basic Density may be increased for any residential development which provides open space in

accordance with the provisions of this regulation. Utilizing this Section, the actual number of dwelling units permitted in any environment shall be determined according to the ratio of land allocated for open space purposes to the gross acreage of land. Where a developer agrees to retain trees of uncommon quality over and above that required by this regulation or agrees to preserve and/or restore unique historical sites or structures, the following special bonus density may be granted:

When the open space calculation is made, the acreage covered by the above-mentioned situation may be counted as up to double (as determined by the Planning Department) and may be used to increase the open space density in this fashion.

For the purposes of calculating open space density, no more than fifty percent (50%) of the open space requirements may include steep slopes (greater than forty-five (45) degrees), wetlands or other constraint areas. Each acre of constraint area that is used for open space shall be credited as one-half (1/2) acre in the open space calculation.

If a constraint area is designated as part of the open space allotment (e.g., steep slope, ravine, bog, etc.), then that constraint area, to the extent it is definable, must be designated as open space. The total of all constraint areas designated will qualify for no more than fifty percent (50%) of the total open space allotment.

9.230.040 Bonus Density.

A. General Eligibility. The purpose of this Section is to provide the incentive whereby the additional density provided for in Section 9.230.030 may be further increased up to, but not exceeding, twenty-five percent (25%). The 25% increase in density permitted by this Section shall be the maximum, regardless of whether one or more than one of the following options are used. Eligibility to obtain a "bonus density" is based upon the following criteria:

1. Compliance with provisions of Section 9.230.030; and
2. Site plan review and approval in order to insure that all proposals comply with all requirements of this regulation and with the intent of the Comprehensive Plan. Site plan review required for open space density shall be considered prior to the time site plan approval is being considered for "bonus density;"
3. At least fifteen percent (15%) of the site shall be left in open space.

B. Specific Requirements. Bonus density is authorized when one or more of the following is achieved:

1. School sites. The provision of a school site meeting the approval of the school district, Examiner and the State Council of Education. It is the option of the school district to accept such a dedication, and a large development may be required to provide such a dedication. This results in a bonus by including the school site as open space and discounting the school and

related parking, etc., in calculating the site coverage. The bonus density shall be ten percent.

2. Public recreation facilities. Where the developer provides recreation facilities for the general public as part of the open space in a manner determined by the Examiner to be consistent with the Comprehensive Plan, a bonus density may be awarded as follows:

a. Ten percent for eligible facilities such as playfields, parks, boating access or similar facilities consistent with the Plan;

b. Ten percent for trail easements in conjunction with the proposed Peninsula-wide trails system;

c. Ten percent for the provision of improvements to trails (bicycle, etc.) within the proposed development site, including those provided within the road and/or utilities rights-of-way;

d. Ten percent for improvements and facilities related to adjacent trail easements (where a bicycle or equestrian trail is designated in the Comprehensive Plan adjacent to a public roadway, the developer of the property on which such trails are designated shall be responsible for construction of such trail(s) prior to final site plan or final plat approval);

e. Ten percent for coordination of public open space with similar open space in adjacent developments for the purpose of creating neighborhood parks.

3. Private recreation facilities. Where the developer provides recreation facilities for the residents of the proposed development in such a manner as to reduce the impact of the proposed development upon nearby public recreation facilities, up to a ten percent bonus density may be awarded using the criteria listed in 3. above.

4. The design of roadways to minimize cut and fill on existing contours within the limits of good safety may be eligible for up to ten percent bonus.

9.230.050 Performance Standards - Buffers and Screening.

A. The buffer greenbelt shall be part of the open space and not part of the lot area assigned to residential or other uses, except as provided in the "open space" Section of each environment.

B. All buffer greenbelts shall include, unless waived by the Planning Department or the Examiner in conformance with the Plan and intent of this Chapter (i.e., view protection), a dense screen planting of canopy vegetation and other ground cover to the full length of the lot line in residential developments and may be required for nonresidential uses to serve as a barrier to visibility, air-borne particles, glare and noise and shall be in accordance with all the following

requirements:

1. Plant materials used in the perimeter screen planting shall be alternately at least six feet and three feet high when planted and be of such species as will produce ultimately a dense visual screen at least ten feet high (natural vegetation is to be used whenever possible to minimize the impact of irrigation and fertilizers).

This requirement may be altered when the Planning Department determines more stringent provisions are necessary in order to meet the goals and objectives of the Plan.

2. The screen planting shall be maintained permanently, and any plant material which does not live shall be replaced within one year.

3. The screen planting shall be broken only at points of vehicular or pedestrian entrance or when topographic features provide permanent screening and/or a scenic vista is provided.

4. A clear cut area shall not be allowed as a buffer area unless Subsection 1. is accomplished and any such land shall be restored prior to its acceptance as such.

5. Buffer greenbelts shall be laid out to respect existing and proposed off-site uses. The object of the planted or natural buffer shall be qualified in the site plan, subdivision, plat, etc., as: to minimize visual, noise and other impacts, or to prevent access to hazardous areas.

6. The depth of buffers and the extent and type of screening required shall be determined on a case by case basis by the Planning Department and/or Examiner in conformance with the Plan and the intent of this Chapter.

Buffers and screening within the Rural-Residential Environment shall have a minimum depth of ten (10) feet on all property boundary lines. Where existing, native vegetation exists, selective clearing of shrubs and bushes shall be allowed. If no vegetation is located within the stated buffer and screening areas, landscaping shall be provided by the property owner. Low profile fences (i.e., rail post) are encouraged to be used within the dedicated buffer and screening areas to maintain a sense of ruralness and openness.

7. All commercial uses, industrial uses, public facilities, multiple-dwelling uses, plats and short plats within five hundred feet of existing and proposed rights-of-way for SR-16, SR-302 or major arterials shall be completely screened from view from such rights-of-way, except as follows:

a. In existing developments, changes in use or expansions of such uses may be partially or totally exempted from the above screening requirement where the nature of the existing development would make

such screening a partial or total physical impossibility. Such exemptions shall require a variance.

b. For new developments and those requiring site plan review and approval, where topography would preclude such screening, it may be partially or totally waived through the site plan review process.

In the cases of exemption above, it shall be the responsibility of the applicant to demonstrate that the provision of such screening is physically impossible.

c. The requirement for such screening may be partially or totally waived along arterials, SR-302 and along those portions of SR-16 to be relocated, for uses through the site plan review process; providing, the applicant consents to submit to architectural review as provided by site cover provisions of this regulation and such waiver is consistent with the Plan.

8. Where screening is required pursuant to 7. above, on-site canopy vegetation, ground cover or a combination of these with an earth berm shall be utilized as required by the Planning Department and/or Examiner in conformance with this Regulation and with the Plan. The buffer greenbelt used to screen such uses shall be a minimum of twenty-five feet in width (as measured from the right-of-way) and shall be broken only at points of vehicular entrance.

In the case of SR-302, other portions of State Highways not intended to be limited access and arterials, curb cuts shall be kept to a minimum and street graphics shall be visible from the rights-of-way only at points of vehicular or pedestrian entrance. Such street graphics shall not exceed twenty square feet in area; shall be used to identify the use in nature; shall be for the use where it is located; shall be designed to fit into the natural surroundings; and may be lighted as provided in Part XX. of these Regulations (except that only white light is permitted in all but the Urban Environment) and such lighting shall only be used during hours of darkness in order to conserve energy.

9. Generally, a minimum of twenty-five percent of plant material used for buffers or screening should be evergreen and ten percent flowering; provided the following requirements may preempt the general standards:

a. Where noise and glare are problems, a minimum of fifty percent of the plantings shall be evergreens.

b. Where hazardous conditions exist, hedge-type arrangements with thick thorny plants may be required.

c. Where visual screening is most important,

evergreens and flowering trees may be required to be increased to seventy-five percent of the total.

10. Self-maintaining ground cover should be used to the edge of the buffer.

11. Irrigated earth berms may be used to satisfy screening and buffer requirements when landscaped and planted with ground cover which blends with the natural surroundings. The same ten foot height for screening of the perimeter applies. Contours shall be designed to look natural and to prevent erosion. Earth berms and canopy and/or other vegetation may be used in combination to satisfy screening and buffer requirements.

C. Performance Standards for Open Space for the Rural Environment

In addition to the standards in A and B above, the following performance standards are required for the Rural-Basic and Rural-Special environments:

1. Rural-Basic Buffer

A. Buffers within the Rural-Basic environment shall have a minimum depth of thirty (30) feet along public roads except for interior roads servicing a subdivision and thirty (30) feet on all other property boundary lines. Where native vegetation exists, it shall be left undisturbed in its natural state except as provided in B above.

B. When a Rural-Basic environment adjoins a Rural-Special environment, the minimum buffer depth shall be sixty (60) feet for all perimeter buffers which adjoin the Rural-Special environment.

2. Rural-Special Buffer

A. Buffers within the Rural-Special environment shall have a minimum depth of fifty (50) feet along public roads except for interior roads servicing a subdivision. Where native vegetation exists, it shall be left undisturbed in its natural state except as provided in B above.

B. If two Rural-Special environments adjoin each other, the buffer should be located contiguous to each other.

3. In the Rural-Basic environment using the allowable cluster density in Section 9.210.070 B(3) where land is put into contiguous open space, the open space shall be recorded on the subdivision or short subdivision as common area dedicated and maintained as in Section 9.230.060 C. Except for the perimeter buffers, the allowable uses or activities within the designated common area are as follows:

A. Preservation of natural land, which has depth as well as breadth, in its natural state.

B. Sites for retention ponds, drainfields, wells, or water storage structures.

C. Natural resource protection.

D. Wetlands.

Contingent on concurrence of the majority of the homeowners within the subdivision, the following uses or activities are

also allowed:

E. Forestry with accompanying forest management plan

F. Agriculture with accompanying best management plan

G. Pasture

H. Active recreation areas for playfields, tennis courts, picnic areas, or other active related recreation uses.

D. Design Guidelines:

In both the Rural-Basic and Rural-Special environments, the following design guidelines apply:

1. Structures should be placed in, or along the edge of, wooded areas rather than in open fields.

2. Trees should not be removed from ridge lines. Trees, not roofs, should dominate the highest elevation of the project.

3. Roads should follow existing land contours and be located along the edge of wooded areas.

4. Disturbances on individual lots should be minimized by utilizing "building envelopes" to eliminate excessive grading, impervious surfaces, and domestic landscaping.

5. Existing rural features such as barns, silos, fences, orchards, should be preserved when practical.

6. Neighborhood entrances should maximize the use of natural building materials and landscape species.

7. Street lighting should be minimized and shaded so as to not be visible beyond project boundaries.

9.230.060 Administrative Requirements.

A. Review. Open space allocations shall be accepted, rejected or modified during the site plan review process. Where the allocation is accepted for a plat or short plat, the accepted

land shall be precisely shown on the plat or short plat as required by the Planning Department.

B. Conditions. An allocation of open space shall not be accepted unless all of the following provisions are satisfied:

1. The land to be allocated shall not include any tidelands or any buildings or structures (except historic sites) and shall not be covered by any impervious materials or substances, except as is permitted under the provisions of this Chapter;

2. Any land or portion thereof which has been substantially cleared of trees shall not be accepted until it has been restored by the planting of vegetation, pursuant to the Forest Practices Act and regulation, or until a bond has been posted in an amount adequate to provide assurance that tree cover will be restored as a condition of site plan approval. An alternative to a bond may include a letter of credit or an escrow account. A maintenance bond may be required to assure that the condition of landscaping does not deteriorate in the future. The bond shall remain in

effect for two (2) years and may be extended by the County to ensure compliance. Ground cover shall, wherever feasible, consist of native varieties in such a manner as to minimize the need for irrigation and/or fertilization and to restore the land to a natural appearance;

3. All residential development applicants shall demonstrate to the satisfaction of the Planning Department or Examiner that there will be adequate means to preserve, protect and maintain any open space and/or community facilities. The methods used to satisfy this requirement shall be by deed restrictions running with the land covenants;

4. Open space allocated pursuant to this Chapter shall consist of a separate parcel of land subject to the ownership provisions of this Chapter. The open space allocation in short plats may optionally consist of a graphically and legally described area or areas designated as open space within lots within the short plat (identified both on the short plat and as a restriction upon the deed). Such open space allocated within short plats may not be counted as part of the minimum lot area required by this Chapter. If a buffer in a short plat is required, it may be designated as open space or be part of the lot;

5. If within the development the dwelling units will generally not be owned by the occupants, then the Planning Department or Examiner (as appropriate) shall require that the applicant execute some form of restrictive covenant or guarantee that the provisions of this Chapter relating to open space shall not be violated;

6. Any impervious surfaces provided in connection with open space uses shall be counted as part of the maximum site coverage for the gross acreage of the development as permitted for the particular environment. The maximum allowable impervious surface within the allocated open space shall be as follows:

- a. Urban.....Thirty percent
- b. Residential.....Twenty percent
- c. Rural.....Fifteen percent
- d. Rural-Residential.....Not Applicable
- e. Conservancy-Historic.....Not applicable
- f. Natural.....Not applicable
- g. Sensitive Watershed.....Not applicable

C. Ownership. In order to fulfill the intent of the Plan and for the purpose of increasing density, the open space allocation must be owned in one of the following manners:

- 1. Each owner of property within the proposed development shall retain a fractional share of undivided ownership in the allocated open space and any related facilities;
- 2. Owners of property within the proposed development

shall retain a portion of said property as open space

with appropriate deed restrictions and listed responsibilities; and/or

3. Pierce County or some other body or public service organization or company approved by the Planning Department may accept a dedication of such open space for recreation, wildlife protection or some other open space use (i.e., certain agricultural uses) in conformance with the Plan. A public body may accept a dedication of only the development rights, thus the remaining use rights and maintenance obligations will be retained by the applicant or a homeowners association with ownership as provided in 1.

D. Rights and Duties. Subject to the limitations of these Regulations, the person or persons retaining interest in open space land shall have the following rights which may be exercised in respect to such land:

1. The right to locate recreational facilities, such as tennis courts, swimming pools, picnic tables and fireplaces accessory to picnic tables designed to be used exclusively by the owners, residents and their guests;

2. The right to locate pedestrian paths, bicycle paths and bridle paths (including paths joining into any Peninsula-wide trail system);

3. The right to locate such community facilities as wells, drainfields for sewage disposal (individual/community drainfields), retention ponds or similar natural methods of on-site retention of additional runoff generated, etc. Facilities proposed to be located in open space are to be reviewed by the Planning Department or appropriate reviewing authority to ensure the purpose to which open space was allotted is not jeopardized;

4. The responsibility to ensure that no clearing, grading, filling or construction of any kind will be allowed within the designated natural buffer area/perimeter screening easements of the open space area, except for the placement of underground utility lines or other uses permitted in Section 9.230.060D, and planting of supplemental landscaping. Trees may be removed subject to the following conditions:

a. If either the applicant or an adjacent property owner desires to remove a tree or brush because such tree is diseased or dangerous, the party shall request the removal in writing to the other party. The request can either be hand-delivered or sent by certified mail. The non-requesting party has seven (7) calendar days in which to respond after receipt of the letter (receipt by certified mail, return receipt requested). Receipt is also required for hand-delivered notices.

1 A "diseased" tree shall be defined as one that in
2 the opinion of the Pierce County Planning and Land
3 Services Department or an expert approved by Pierce
4 County (such as but not limited to, an experienced
5 forester or an experienced landscaper), has a strong
6 likelihood of infecting other trees or brush in the
7 area or becoming dangerous as a result of the
8 disease. A "dangerous" tree shall be any tree
9 which, in the opinion of the Pierce County Planning
10 and Land Services Department or an expert approved
11 by Pierce County (such as, but not limited to, an
12 experienced forester or an experienced landscaper),
13 has a strong likelihood of falling in the event of a
14 sixty (60) m.p.h. wind;

15 b. If no response is received within seven (7)
16 calendar days, the request shall be deemed approved.

17 c. If the non-requesting party denies the request
18 within seven (7) calendar days, the requesting party
19 may take the request to the Pierce County Planning
20 and Land Services Department for a final decision.

21 5. The right to operate a farm in accordance with
22 reasonable farming standards and conservation practices
23 subject to any conditions set forth in the site plan
24 approval for the proposed development. Such
25 agricultural pursuits may include passive as well as
26 cultivated activities;

27 6. The right to take whatever measures reasonably
28 necessary to protect and maintain such land, or land or
property adjacent thereto or to correct a hazardous
condition posing a threat to life, limb or property;

7. The right to regulate access to or entry onto open
space land subject to the conditions stated in the site
plan approval for the proposed development;

8. The responsibility to maintain both the land and all
related facilities;

9. The responsibility to maintain and preserve historic
structures.

Appendix 7



CHAPTER 17.08

ENVIRONMENTAL REGULATIONS

Sections:

- 17.08.010 Authority.
- 17.08.020 Purpose, applicability and intent.
- 17.08.030 Abbreviations.
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- 17.08.270 Notice--Statute of limitations.
- 17.08.280 Fees for environmental assessments, environmental impact statements, and reconsiderations.

17.08.010 Authority.

The following regulations concerning environmental policies and procedures are hereby established and adopted pursuant to Chapter 43.21C RCW, as amended, entitled, "The State Environmental Policy Act of 1971" (SEPA), and the Washington State Administrative Code, Chapter 197-11, entitled, "State Environmental Policy Act Rules." (Ord. 85-17 Sec. 3 (part), 1985: prior code Sec. 66.02.001)

17.08.020 Purpose, applicability and intent.

- A. The purpose of this chapter is to provide county regulations implementing the State Environmental Policy Act of 1971 (SEPA) which are consistent with the SEPA Rules.
- B. This chapter is applicable to all county departments/divisions, commissions, boards, committees, the County Council and Executive.
- C. This chapter is not intended to require County compliance with the National Environmental Policy Act of 1969 (NEPA). When the county is required by federal law or regulations to be in compliance with NEPA, such

compliance shall be governed by the applicable federal statute and/or regulations and not by this chapter. (Ord. 85-17 Sec. 3 (part), 1985: prior code Sec. 66.02.005)

17.08.030 Abbreviations.

The abbreviations used herein are defined as follows:

1. DEIS - Draft Environmental Impact Statement;
2. DNS - Declaration of Nonsignificance;
3. DPD - Department of Planning & Development;
4. DS - Declaration of Significance;
5. EIS - Environmental Impact Statement;
6. FEIS - Final Environmental Impact Statement;
7. NEPA - National Environmental Policy Act;
8. SEIS - Supplemental Impact Statement;
9. SEPA - State Environmental Policy Act;
10. WAC - Washington Administrative Code.

(Ord. 85-17 Sec. 3 (part), 1985: prior code Sec. 66.02.010)

17.08.040 Definitions.

Pierce County adopts by reference the definitions stated in WAC 197-11-700 through 197-11-799 as now or hereafter amended. In addition to those definitions, the following terms shall have the following meanings unless the context indicates otherwise:

- A. "Aggrieved person" means the project sponsor, or any person affected by the proposal.
- B. "Council" means the Pierce County Council.
- C. "County" means all unincorporated areas of Pierce County.
- D. "Department" means any division, subdivision, or organizational unit of Pierce County, established by regulations, resolution or order.
- E. "Hearing Examiner" means the Pierce County Hearing Examiner, as appointed by the Pierce County Council.
- F. "License" means any form of written permission given to any person, organization, or agency to engage in any activity, as required by law or agency rule. A license includes all or part of a county permit, certificate, approval, registration, charter, or plat approvals or rezones to facilitate a particular proposal. The term does not include a license required solely for revenue purposes.
- G. "Ordinance" means the ordinance, resolution or other procedure used by Pierce County to adopt regulatory requirements.
- H. "SEPA Rules" means WAC Chapter 197-11 adopted by Washington State Department of Ecology as now or hereafter amended.
(Ord. 85-17 Sec. 3 (part), 1985: prior code Sec. 66.02.015)

17.08.050 Designation of Responsible Official.

For those proposals for which Pierce County is the lead agency, the Responsible Official shall be the Director of Planning and Development and/or his/her designee. (Ord. 85-17 Sec. 3 (part), 1985: prior code Sec. 66.02.020)

17.08.060 Lead agency determination and responsibilities.

- A. When receiving an application for or initiating a proposal that involves a nonexempt action, the Responsible Official shall determine the lead agency for that proposal under WAC 197-11-050 and 197-11-922 through 197-11-940; unless the lead agency has been previously determined or the department is aware that another agency is in the process of determining the lead agency.
- B. For all proposals for which Pierce County is the lead agency, the Responsible Official shall make the threshold determination, supervise scoping and preparation of any required environmental impact statement (EIS), and perform any other functions assigned to the "lead agency" or "Responsible Official" by those sections of the SEPA rules that were adopted by reference in WAC 197-11. (Ord. #89-72s)
- C. In addition, the Responsible Official shall be responsible for preparation of written comments for Pierce County in response to a consultation request prior to a threshold determination, participation in scoping, and/or reviewing a DEIS.
- D. This person shall be responsible for the County's compliance with WAC 197-11-550 whenever the County is a consulted agency and is authorized to develop operating procedures that will ensure that responses to consultation requests are prepared in a timely fashion and include data from all appropriate departments of the county.
- E. Pierce County shall retain all documents required by the SEPA rules (WAC Chapter 197-11) and make them available in accordance with RCW Chapter 42.17.
- F. When the county is the lead agency for a proposal, the Responsible Official shall supervise compliance with the threshold determination requirements, and if an EIS is necessary, shall supervise preparation of the EIS.
- G. When Pierce County is not the lead agency for a proposal, all departments of the county shall use and consider, as appropriate, either the DNS or the final EIS of the lead agency in making decisions on the proposal. The Responsible Official shall not prepare or require preparation of a DNS or EIS in addition to that prepared by the lead agency, unless required under WAC 197-11-600. In some cases, the county may conduct supplemental environmental review under WAC 197-11-600.
- H. If the county or any of its departments receives a lead agency determination made by another agency that appears inconsistent with the criteria of WAC 197-11-922 through 197-11-940, it may object to the determination. Any objection must be made to the agency originally making the determination. If the objection is not resolved within fifteen days of receipt of the determination, the county shall petition the Department

2. Pierce County, upon the recommendation of the Responsible Official, may withhold approval of an exempt action that would lead to modification of the physical environment, when such modification would serve no purpose if nonexempt action(s) were not approved; and
3. Pierce County may withhold approval of exempt actions that would lead to substantial financial expenditures by a private applicant when the expenditures would serve no purpose if nonexempt action(s) were not approved.
(Ord. 85-17 Sec. 3 (part), 1985: prior code Sec. 66.02.040)

17.08.100 Environmentally sensitive areas.

- A. In accordance with WAC 197-11-908, Pierce County designates the following areas as being environmentally sensitive areas:
 1. Areas designated Natural by the Pierce County Shoreline Management Master Program environment maps.
 2. The drainage basins of the following commercial oyster-growing bays as depicted on Sensitive Area maps on file in the Pierce County Department of Permits and Land Services:
 - a. Burley Lagoon,
 - b. Minter Bay,
 - c. Rocky Bay, and
 - d. Filucy Bay.
 3. Clear Creek (Summit-Waller Road area) as depicted on Sensitive Area Maps on file in the Pierce County Department of Permits and Land Services. (Ord. 89-119)
The above-stated maps are adopted in this chapter by reference as part of this regulation.

The following categorical exemptions set forth in WAC 197-11-800 shall not apply when a project proposal is located in or partially within sensitive areas: WAC 197-11-800 (1), (2c), (2e), (2f), (2g), (6a), (25h).
- B. The county shall treat proposals located wholly or partially within an environmentally sensitive area no differently than other proposals under this chapter, making a threshold determination for all such proposals. The county shall not automatically require an EIS for a proposal merely because it is proposed for location in an environmentally sensitive area.
- C. Certain exemptions do not apply to lands covered by water, regardless of whether such lands covered by water are mapped.
(Ord. 85-17 Sec. 3 (part), 1985: prior code Sec. 66.02.045)

17.08.110 Emergency action exemption.

- A. The following actions which must be undertaken immediately or for which there is insufficient time for full compliance with this chapter, are exempt from the procedural requirements of this chapter:
 1. Actions necessary to prevent an imminent threat to public health or safety;
 2. Actions necessary to prevent an imminent danger to public or private property; or
 3. Actions necessary to prevent an imminent threat of serious environmental degradation.

- B. The Responsible Official shall determine on a case-by-case basis emergency action which satisfies the general requirements of this section.
(Ord. 85-17 Sec. 3 (part), 1985: prior code Sec. 66.02.050)

17.08.120 Environmental checklist.

- A. A completed environmental checklist (or a copy), in the form provided in WAC 197-11-960, shall be filed for any permit, license, certificate, or other approval not specifically exempted in this chapter; except, a checklist is not needed if the county and applicant agree an EIS is required, SEPA review has been completed, or SEPA compliance has been initiated by another agency. The county shall use the environmental checklist to determine the lead agency and for making the threshold determination.
- B. All private applicants shall complete their own environmental checklist, with assistance from Pierce County as necessary. County departments initiating a proposal shall complete the environmental checklist for that proposal.
- C. The county may require that it, rather than the private applicant, complete all or part of the environmental checklist for a private proposal, if either of the following occurs:
1. The county has access to technical information not available to the private applicant; or
 2. The applicant has provided inaccurate information on previous proposals or on proposals currently under consideration.
(Ord. 85-17 Sec. 3 (part), 1985: prior code Sec. 66.02.055)

17.08.130 Affirmative threshold determination.

In the event the Responsible Official or the Hearing Examiner determines that a proposal is likely to have a significant adverse effect on the quality of the environment, the Responsible Official shall prepare a determination of significance using the form in WAC 197-11-980. The Responsible Official shall also list the proposal in the "EIS in Preparation Register" maintained in the Department of Planning and Development. Thereafter, the EIS and scoping and preparation procedures specified by WAC 197-11-408 through and including 197-11-460 shall be followed. (Ord. 85-17 3 (part), 1985: prior code 66.02.060)

17.08.140 Withdrawal of negative or affirmative threshold determination.

In some cases, as specified by WAC 197-11-340, 197-11-360 and 197-11-600, the county may withdraw its affirmative or negative threshold determination.
(Ord. 85-17 Sec. 3 (part), 1985: prior code Sec. 66.02.065)

17.08.150 Environmental impact statement.

- A. Pierce County adopts by reference WAC 197-11-400 through 197-11-460, as now or hereafter amended. The contents and preparation procedures for draft environmental impact statements shall be governed by the SEPA rules cited herein or as hereafter amended.

B. Preparation of the draft and final EIS (DEIS and FEIS) and draft and final supplemental EIS's (SEIS) shall be under the direction of the Responsible Official. Before the county issues an EIS, the Responsible Official shall be satisfied that it complies with this chapter and WAC Chapter 197-11.

1. The DEIS and FEIS or draft and final SEIS shall be prepared by county staff, the applicant, or by a consultant selected by the county or the applicant. If the Responsible Official requires an EIS for a proposal and determines that someone other than the county will prepare the EIS, the Responsible Official shall notify the applicant within five working days after completion of the threshold determination. The Responsible Official shall also notify the applicant of the county's procedure for EIS preparation, including approval of the DEIS and FEIS prior to distribution.

2. The county may require an applicant to provide information the county does not possess, including specific investigations. However, the applicant is not required to supply information not required under this chapter or information requested from another agency pursuant to this chapter. (Ord. 85-17 Sec. 3 (part), 1985: prior code Sec. 66.02.070)

17.08.160 Public notice.

A. Whenever Pierce County issues a DNS under WAC 197-11-340(2), a DS under WAC 197-11-360(3), a DEIS under WAC 197-11-455(5) or a SEIS under WAC 197-11-620, notice shall be given as follows:

1. Include with public notice required for a nonexempt license, notice stating whether a DS, DNS, DEIS, or SEIS has been issued and, if appropriate, when comments are due;
2. In the event no public notice is required for the permit or approval, the project applicant shall insure notice is given by publishing notice in a newspaper of general circulation in the county or general area where the proposal is located as determined by the Responsible Official. When publishing notice, the thirty-day appeal period required herein will begin on the date of publication.
3. The Responsible Official may require notice by alternative methods or additional notice such as posting the property if deemed necessary to provide adequate public notice of a pending action;
4. Whenever the county issues a DS under WAC 197-11-360(3), the county shall state the scoping procedure for the proposal in the DS as required in WAC 197-11-408 and in the public notice.

B. The applicant is required to complete the public notice requirements for his/her proposal and provide affidavits of publishing to the DPD. The applicant will be required to pay the cost of any notice required pursuant to subsections A2 and A3 of this section. (Ord. 85-17 Sec. 3 (part), 1985: prior code Sec. 66.02.075)

17.08.170 Substantive authority.

A. The policies and goals set forth in this ordinance supplement existing state and county laws of Pierce County.

- B. The County may attach conditions to a permit or approval for a proposal provided that:
1. Such conditions are necessary to mitigate specific probable adverse environmental impacts identified in environmental documents prepared pursuant to this ordinance; and
 2. Such conditions are in writing; and
 3. The mitigation measures included in such conditions are reasonable and capable of being accomplished; and
 4. The County has considered whether other local, state, or federal mitigation measures applied to the proposal are sufficient to mitigate the identified impacts; and
 5. Such conditions are based on one or more policies in subsection (4) of this section and cited in the license or other decision document.
- C. The County may deny a permit or approval for a proposal on the basis of SEPA provided that:
1. A finding is made that approval of the proposal would result in probable significant adverse environmental impacts that are identified in a FEIS or final SEIS prepared pursuant to this ordinance; and
 2. A finding is made that there are no reasonable mitigation measures capable of being accomplished that are sufficient to mitigate the identified impact; and
 3. The denial is based on one or more policies identified in subsection D. of this section and identified in writing in the decision document. (Ord. #89-72s)
- D. The County adopts the following policies as the basis for the County's exercise of authority pursuant to this section:
1. The County shall use all practicable means, consistent with other essential considerations of state policy, to improve and coordinate plans, functions, programs, and resources to the end that the state and its citizens may:
 - a. Endeavor to achieve for the people of Pierce County safe, healthful, and aesthetically pleasing surroundings;
 - b. Preserve important historic, cultural, and natural aspects of our national heritage;
 - c. Achieve a balance between population and resource use; and
 - d. Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.
 2. Policies included in the following County (codes, ordinances, resolutions, plans) as now existing or hereafter amended, shall supplement this Chapter:
 - a. The Pierce County Comprehensive Plan;
 - b. The Gig Harbor Peninsula Comprehensive Plan and Development Regulations;
 - c. The Lakes District Comprehensive Plan;
 - d. The Parkland-Spanaway Comprehensive Plan;
 - e. The Interim Policies for the Bridgeport Way Corridor;

- f. The Pierce County Shoreline Master Program and Regulations;
 - g. The Pierce County Zoning Code;
 - h. The Pierce County Subdivision Ordinance;
 - i. The Pierce County Comprehensive Park and Recreation Plan;
 - j. The Pierce County Fire Flow Ordinance
 - k. The Hylebos Basin Drainage Plan;
 - l. The 144th St. Drainage Basin Plan;
 - m. Interim HUD Flood Insurance Study for Pierce County;
 - n. Pierce County Road Standards;
 - o. Pierce County Road Approach Standards;
 - p. The Burley/Minter Drainage Basin Water Quality Plan;
 - q. The Kitsap Basin Water Pollution and Abatement Plan;
 - r. Chambers Creek-Clover Creek Sewerage Control Plan;
 - s. Puyallup River Basin General Sewerage Plan;
 - t. Chambers-Clover Creek Drainage Basin Plan;
 - u. Housing Assistance Plan;
 - v. Parkland-Spanaway Zoning Code;
 - w. Pierce County Regulations for Proposed Developments using Local Access Roads;
 - x. Pierce County Flood Damage Prevention Regulations;
 - y. Pierce County Grading, Filling and Clearing Ordinance;
 - z. Pierce County Off-Site Road Improvement Ordinance;
 - aa. Chapter 2.88, Pierce County Code, Structures of Historical and Architectural Significance;
 - ab. Pierce County Fair Housing Regulations;
 - ac. Noise Pollution Control Regulations;
 - ad. Title 8, Pierce County Code, Health and Welfare;
 - ae. Title 15, Pierce County Code, Building Construction;
 - af. Title 12, Roads and Rights-of-way;
 - ag. Pierce County Sludge Utilization Policy;
 - ah. Pierce County Utilities Department Sludge Management Program; and
 - ai. Pierce County Storm Drainage Ordinance;
- (Ord. 85-17 Sec. 3 (part), 1985: prior code Sec. 66.02.080)
- aj. Pierce County Wetland Management Policies; (Ord. #88-182)
 - ak. Pierce County Wetland Inventory. (Ord. #88-197)
 - al. Summit-Waller Community Plan. (Ord. #89-72s)

17.08.180 Appeals.

- A. Pierce County established the following administrative appeal procedures under RCW 43.21C.075 and WAC 197-11-680:
 - 1. An applicant for a permit and/or variance, other than one requested pursuant to the Shoreline Management Master Plan, whose proposal is denied or conditioned on the basis of SEPA, may appeal said denial or condition as set forth in this section.
 - 2. Any agency or person may appeal the county's procedural compliance with WAC Chapter 197-11 for issuance of a final DNS, a DS or a FEIS.
 - 3. Any appeal under this chapter must be perfected by filing a written notice of appeal on appropriate forms with the DPD, along with the appropriate appeal fee, within thirty days of the date of the final determination of the DS, DNS, or MDNS, (as established pursuant to WAC 197-11-390) or within thirty (30) days of the date of issuance of the FEIS (as established pursuant to WAC 197-11-460). (Ord. #89-72s)

4. If any appeal of the Responsible Official's decision is filed pursuant to this chapter, said Responsible Official shall prepare Findings and Conclusions regarding the decision. The above shall be made available to the appellant and the public in a timely manner. The appellant shall have ten days from the date of issuance of the Responsible Official's Finding and Conclusions to amend the notice of appeal to state with specificity the decisions or procedure being appealed and the reasons why the appealed decision or procedure should be revised or modified.
5. As provided by RCW 43.21C.075(3)(d), the procedural determination by the county's Responsible Official shall be entitled to substantial weight in any appeal proceeding. (Ord. #89-72s)

17.08.190 Public notice of appeal.

Whenever Pierce County receives a timely notice of appeal under this chapter, properly perfected, the county shall give public notice by:

- A. Publishing notice in a newspaper of general circulation in the county or general area where the proposal is located; and
- B. Mailing notice to the appellant, project sponsor, and any individuals requesting notice. (Ord. 85-17 Sec. 3 (part), 1985: prior code Sec. 66.02.090)

17.08.200 Dismissal of appeal.

The Hearing Examiner may summarily dismiss an appeal without hearing when such appeal is determined by the Examiner to be without merit on its face, frivolous, or brought merely to secure a delay, or that the appellant lacks standing to appeal. (Ord. 85-17 Sec. 3 (part), 1985: prior code Sec. 66.02.091)

17.08.210 Public hearing on appeal.

- A. Except as provided in Section 17.08.200 and 17.08.230, the Hearing Examiner shall conduct public hearings on all appeals relating to this chapter. The decision of the Hearing Examiner is final unless appealed to the Pierce County Council as set forth in this chapter. The Hearing Examiner shall have jurisdiction to review de novo a determination of the Responsible Official. The Hearing Examiner may adopt, amend and adopt, amend, or reverse the determination of the Responsible Official. (Ord. #89-72s)
- B. All public hearings conducted by the Hearing Examiner shall be tape-recorded. Any testimony provided shall be under oath. (Ord. 85-17 Sec. 3 (part), 1985: prior code Sec. 66.02.092) (Ord. #89-72s)

17.08.220 Hearing Examiner—Decision.

Within ten working days of the conclusion of the hearing, the Examiner shall render a decision or recommendation, together with findings of fact and conclusions, and shall transmit a copy thereof to all parties of record. (Ord. 85-17 Sec. 3 (part), 1985: prior code Sec. 66.02.093)

17.08.230 Optional procedure.

The Hearing Examiner may render a decision on an appeal, in writing, without holding a public hearing when the parties agree that no issues of fact are to be decided. When issues of law are to be determined and opposing parties agree, they may request the Hearing Examiner to render a decision based upon written briefs. The Hearing Examiner shall render a written decision within ten working days of receipt of briefs. (Ord. 85-17 Sec. 3 (part), 1985: prior code Sec. 66.02.094)

17.08.240 Reconsideration.

A. An aggrieved party of record may, within seven working days of the date of the written decision, file with the DPD a written request for reconsideration by the Examiner. This request shall set forth alleged errors or misinterpretations of fact by the Examiner, and the Examiner may, after review of the record, take such further action as deemed proper and may render a revised decision. Only one request for reconsideration may be filed by any one person or party even if the Examiner reverses or modified the original decision or changes the language in the decision originally rendered.

B. "Parties of record" are those persons who have:

1. Testified before the Examiner; or
2. Listed their names on a sign-up sheet which is available during the Examiner's hearings; or
3. Advised the Planning Department, in writing, of their desire to be a party of record;
4. At the discretion of the Examiner are determined to be affected by or have an interest in the proceeding.

(Ord. 85-17 Sec. 3 (part), 1985: prior code Sec. 66.02.095)

17.08.250 Appeal of Examiner's decision.

The final decision by the Examiner may be appealed to the Council by any aggrieved party of record. Said appeal procedure is as follows:

- A. The appellant must file written notice of appeal with the DPD, along with the the \$250.00 appeal fee, within ten (10) working days of the date of mailing of the Examiner's final decision; provided, that if the Examiner was requested to reconsider the decision, then the appeal must be filed within ten working days of the mailing of the Examiner's final order or decision on the reconsideration request. (Ord. 87-201)
- B. The notice of appeal shall concisely specify each error and/or issue which the Council is asked to consider on appeal.
- C. Upon the filing of an appeal, the DPD shall forward nine copies of the Examiner's decision, nine copies of the official file, and a tape-recording of the proceedings before the Examiner to the Clerk of the Council.

17.08.260 Council's procedure on appeal.

- A. The Council's procedure for an appeal of the Examiner's decision shall be governed generally by Pierce County Code 61.20 and the Council's Permanent Rules of procedures.
- B. The decision of the Council approving or rejecting the decision of the Examiner in any appeal of the final threshold determination or FEIS is final and conclusive unless SEPA issues related to the threshold determination or FEIS are raised in a judicial appeal of the underlying governmental action (defined at WAC 197-11-799).
 - 1. If there is a time limit established by statute or ordinance for appealing the underlying governmental action, then appeals (or portions thereof) raising SEPA issues must be filed within thirty (30) days after DPD gives official notice according to WAC 197-11-680(5).
 - 2. The Council shall give notice under WAC 197-11-680(5) when it takes final action on an appeal of a Hearing Examiner decision for which a statute or ordinance establishes a time limit for commencing a judicial appeal.
 - 3. In any instance where subsection B.1. of this Section allows the SEPA portion of a judicial appeal to be filed after the time limit established by statute or ordinance for appealing the underlying governmental action, some judicial action must be filed within the time set by statute or ordinance. That action may be later amended within thirty (30) days after the agency gives official notice to raise SEPA issues.
- C. Where SEPA issues were raised first during an administrative appeal, any person desiring to raise SEPA issues in a judicial appeal must file a notice of intent to do so with the Responsible Official within the time limit set by statute or ordinance for appealing the underlying governmental action.

(Ord. #89-72s)

17.08.270 Notice--Statute of Limitations.

- A. The county, applicant for, or proponent of an action may publish a notice of action pursuant to RCW 43.21C.080 for any action.
- B. The form of the notice shall be substantially in the form provided in WAC 197-11-990. The notice shall be published by the applicant or proponent pursuant to RCW 43.21C.080. (Ord. 85-17 Sec. 3 (part), 1985: prior code Sec. 66.02.098)

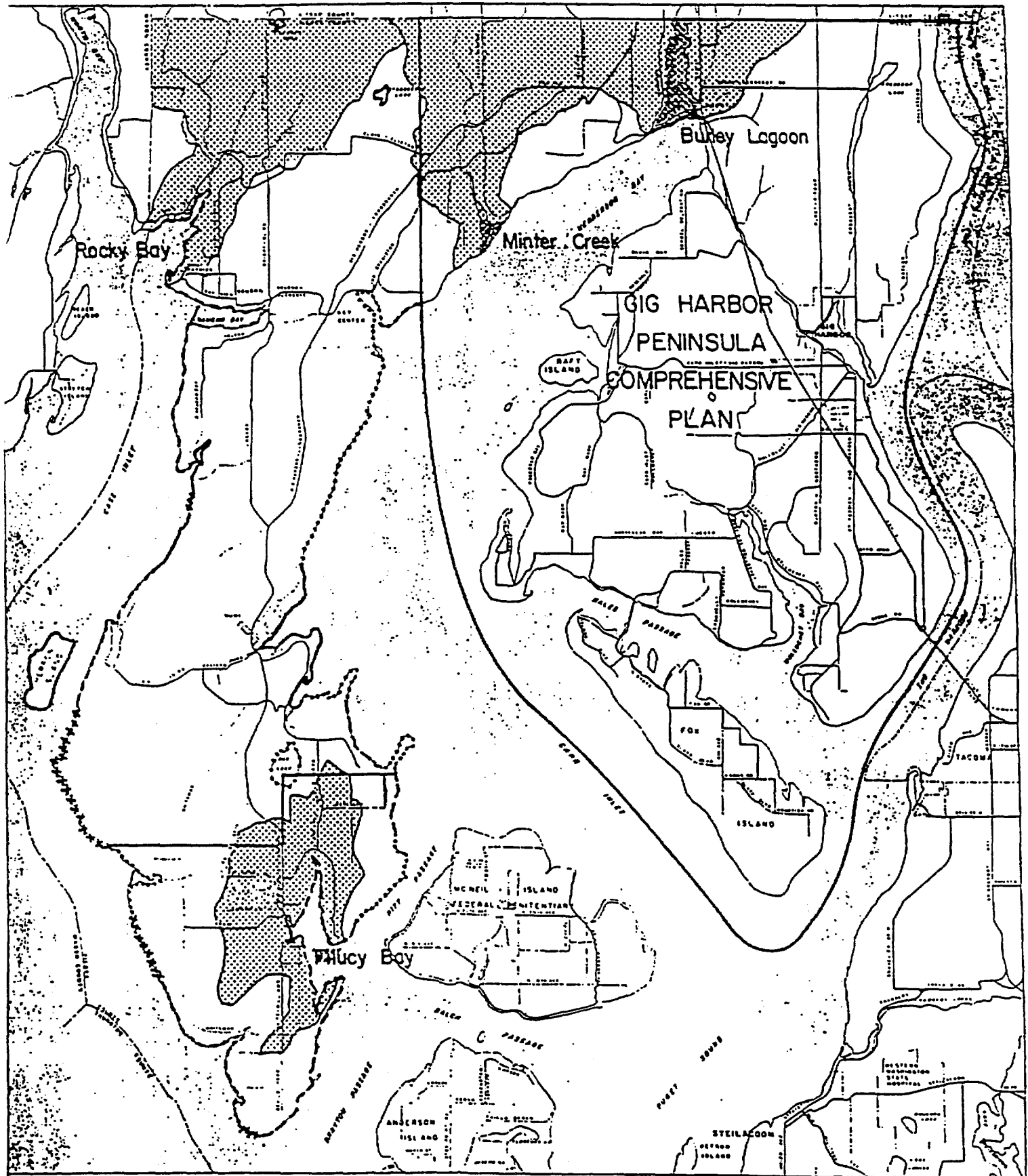
17.08.280 Fees for environmental assessments, environmental impact statements, and reconsiderations.

The following fee schedule applies to environmental assessments or environmental impact statements as required pursuant to the State Environmental Policy Act of 1971, for applications or requests for county action in accordance with the provisions of this chapter.

- (1) The Environmental Assessment - Base fee of \$100.00. If an expanded checklist is required by the Environmental Official, an additional \$75.00 fee will be assessed. (Nonrefundable) (Ord. 87-201, 1988)
- (2) Environmental Impact Statement - Base fee of \$750.00 for first twenty hours of professional work, plus \$40.00 per hour for each hour thereafter. (Nonrefundable) (Ord. 87-201, 1988)
- (3) Determinations of nonsignificance or final environmental impact statements which are required to be prepared and submitted by other local, state or federal quasi-public agencies, are exempt from payment of fees required pursuant to this chapter. However, the costs of preparing an environmental impact statement shall be borne by said other entity. (Ord. 87.201, 1988; Ord. 85-182S Sec. 3 (part), 1985; Ord. 85-17 Sec. 3 (part), 1985; prior code Sec. 66.02.100)
- (4) Reconsideration of a decision by the Hearing Examiner - No Fee. (Ord. 87-201, 1988)

PRM:1708

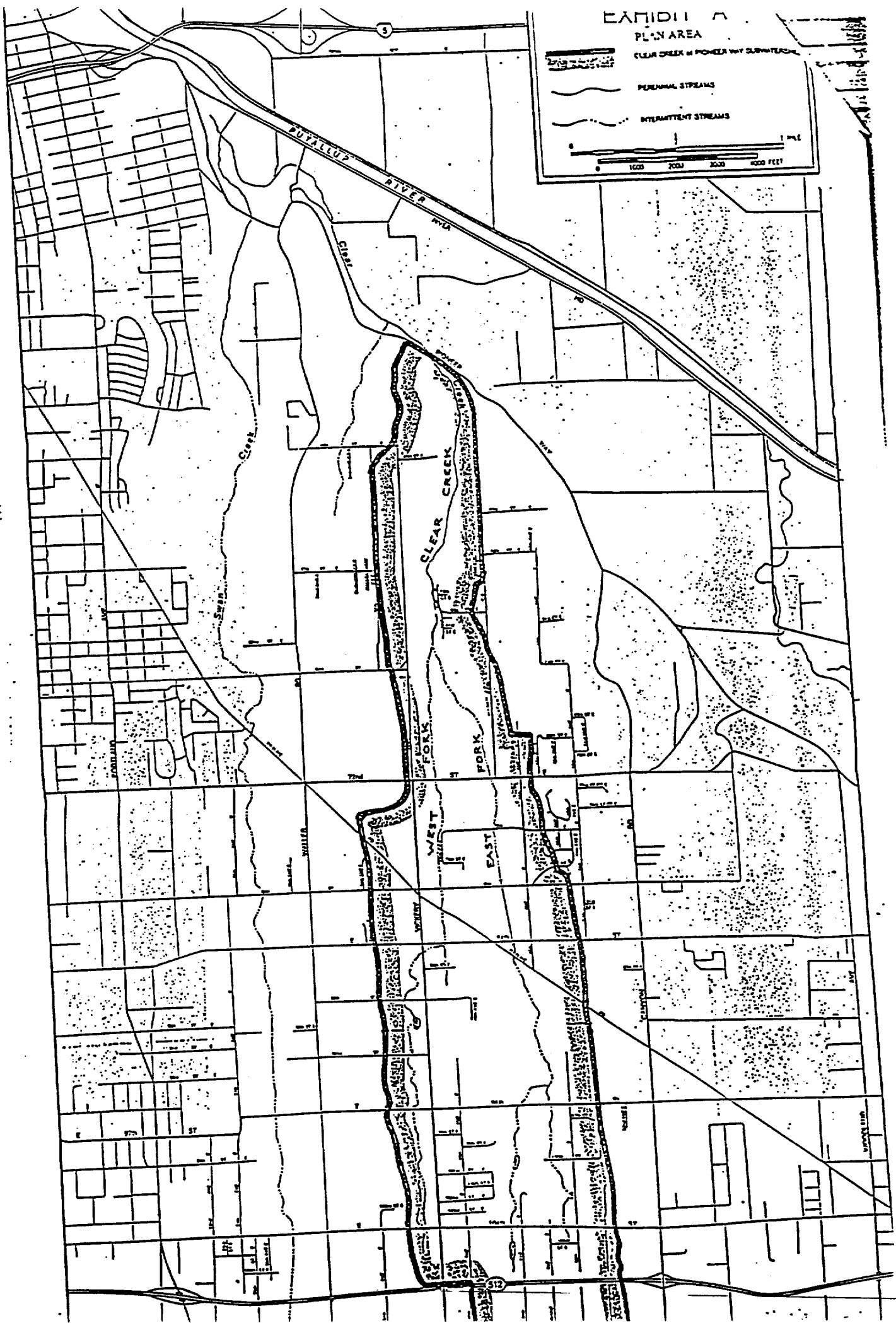
FIGURE 5 - SENSITIVE AREA BOUNDARY



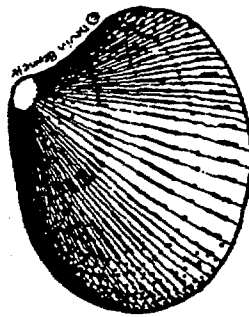
TACOMA-PIERCE COUNTY HEALTH DEPARTMENT

SENSITIVE AREA:





Appendix 8



THURSTON COUNTY PROPOSALS FOR RURAL ZONING

The process used to prepare these alternative proposals began with the County staff meeting with a citizens work group to discuss the rural goals and policies of the Comprehensive Plan. County staff prepared a preliminary proposal covering rural residential zoning and cluster housing and, based on comments from the citizens work group, made some revisions to it. Individual citizens work group members also prepared separate proposals on clustering. These proposals were presented to the County Planning Commission in October 1991. The Commission agreed that the two rural zoning alternatives and cluster policies discussed in this report should be brought forward to the public workshops and Planning Commission hearings. Also included here are proposals for a new Public Preserves District and Military Reservation District. While the proposals described in this report do not represent a consensus of the citizens work group, the group was instrumental in identifying key issues related to rural zoning and developing alternative solutions to those issues.

Citizens Work Group Members

Doug DeForest
Steve Smith
Jeff Powell
Joseph Beaulieu
Nick Adams
John Huddleston
Priscilla Terry
Jerry Parker
Gita Moulton
Ed Sapsinsley
Sandy Moore
Jean Stam
Joann Lysak
Hans Littooy
Jim Holly

Olympia Master Builders
Olympia Master Builders
Prime Locations Inc.
Olympia-Thurston County Chamber of Commerce
CLUE
Yelm Chamber of Commerce
Lacey Area Chamber of Commerce
Sensible Growth Coalition
SPEECH
Jonas Hill Neighbors
Sierra Club
Black Hills Audubon
Northeast Thurston Action
Delphi Association
Thurston Futures

RURAL ZONING ALTERNATIVES

The 1988 Thurston County Comprehensive Plan states that the rural area should:

1. Maintain a balance between human uses and the natural environment;
2. Maintain the land and water environments required by natural resource-based economic activities, wildlife habitats, rural lifestyles, outdoor recreation and other open space; and
3. Develop at low levels of intensity so that demands will not be created for high levels of public services and facilities.

The Comprehensive Plan defines the rural area as including a mixture of small farms, pastures, wooded areas, scattered residences and rural residential developments, recreational lakes, rivers, marine shorelines, and undeveloped areas where outdoor recreation and other open space activities occur.

The rural area is an integral part of the growth management strategy embodied within the Comprehensive Plan. Setting aside areas within the County for low intensity rural uses allows resource activities and rural character to be maintained, with low public service demands, while still accommodating growth within identified urban growth areas. Accordingly, an important assumption in considering zoning densities for the rural area is that the growth areas of the County will accommodate most of the projected population growth over the next 20 years and that the rural area will not be used for spillover growth.

In order to bring the zoning within the rural area into consistency with the 1988 Comprehensive Plan, the Board of County Commissioners in 1990 adopted a countywide rezone to one dwelling unit per five acres. In taking this action, the Board recognized that some parcels within the rural area meet the Comprehensive Plan criteria for higher densities. Therefore, staff was directed to determine which parcels are consistent with those criteria and to return with proposed zoning revisions by early 1992.

County staff prepared an initial rural zoning proposal based on the Comprehensive Plan criteria described below. Upon review by the County Planning Commission, it was decided that two alternatives should be brought forward to the public workshops and Planning Commission hearings. These alternatives provide for limited development at densities higher than one residence (dwelling unit) per five acres due to concerns about the cost of providing public services and facilities, water quality, soil suitability and the need to conserve lands for resource uses and to protect critical areas.

1 DWELLING UNIT PER 5 ACRES DISTRICT

THE COMPREHENSIVE PLAN PROVIDES FOR 1 DU/5 ACRES AS THE COMMON DENSITY IN RURAL AREAS, TO BE APPLIED TO AREAS:

- With severe soil limitations.
- With steep slopes.
- With very limited ground water.
- In/or adjacent to farm or forest lands or aquaculture management districts.
- Too far from urban areas to enable cost effective provision of public services.
- That contain land uses that do not require extension or provision of urban services.
- That are in larger parcels, over five acres in size.

ALTERNATIVE PROPOSALS:

Alternative A - Retains 1 du/5 acre zoning where 5 acre or larger parcels represent the predominant development pattern, except in long-term resource areas, public preserves and Fort Lewis. All existing legal lots less than 5 acres in size within this district are grandfathered.

Alternative B - Retains 1 du/5 acre zoning, except in long-term resource areas, public preserves and Fort Lewis. All existing legal lots less than 5 acres in size within this district are grandfathered.

1 DWELLING UNIT PER 2 ACRES DISTRICT

THE COMPREHENSIVE PLAN ALLOWS 1 DU/2 ACRE DENSITY IN RELATIVELY SMALL AREAS:

- To provide a buffer between existing rural developments and areas of higher or lower densities.
- To provide a transition between existing rural residential subdivisions and lower intensity rural areas.
- Where a density higher than one unit per five acres already exists.
- Where soil conditions are able to handle the cumulative long term impacts of on-site sewage disposal without adverse impacts to ground and surface waters.

ALTERNATIVE PROPOSALS:

Alternative A - Allows 1 du/2 acre zoning in non-shoreline areas where 75% or more of the existing lots within an 80-acre area are 2 acres in size. Along shorelines, 1 du/2 acre zoning occurs only where 90% or more of existing lots within a 40-acre area are 2 acres in size.

Alternative B - This zoning district is not included in Alternative B. All existing legal lots less than 5 acres in size are grandfathered.

1 DWELLING UNIT PER 1 ACRE DISTRICT

THE COMPREHENSIVE PLAN ALLOWS 1 DU/1 ACRE DENSITY ADJACENT TO URBAN AREAS:

- To provide a buffer between rural areas and high urban densities, where no natural buffers such as ravines or public open space exist.
- Where site development practices such as clustering will also be used to buffer rural areas and to maintain large tracts of open areas.
- Where a mix of higher density residential developments, scattered single residences, and small farms exist, and where some exclusively residential developments are expected to continue to occur.
- Where extensive environmental development constraints are expected to result in an overall density average lower than one unit per acre.
- Where soil conditions are able to handle the cumulative long-term impacts of on-site sewage disposal without adverse impacts to ground and surface waters.

ALTERNATIVE PROPOSALS:

Alternative A - Allows 1 du/1 acre zoning in non-shoreline areas where 75% or more of the existing lots within an 80-acre area are 1 acre in size. Along shorelines, 1 du/1 acre zoning occurs only where 90% or more of existing lots within a 40-acre area are 1 acre in size.

Alternative B - This zoning district is not included in Alternative B. All existing legal lots less than 5 acres in size are grandfathered.

2 DWELLING UNITS PER 1 ACRE DISTRICT

THE COMPREHENSIVE PLAN ALLOWS 2 DU/1 ACRE DENSITY IN VERY LIMITED AND EXCEPTIONAL CIRCUMSTANCES:

- Where development and platted lots around marine and freshwater shorelines or other recreational amenities exist.
- Where small lot residential development already exists.
- Where shoreline resources and ground and surface water can handle long-term, higher density use without adverse impacts.
- Where community water systems can be efficiently provided.

ALTERNATIVE PROPOSALS:

Alternative A - Allows 2 du/1 acre zoning only where 90% or more of the existing lots within an 80-acre area (40-acre area along shorelines) are 1/2 acre or smaller in size.

Alternative B - This zoning district is not included in Alternative B. All existing legal lots less than 5 acres in size are grandfathered.

PUBLIC PRESERVES DISTRICT

THE COMPREHENSIVE PLAN CALLS FOR:

- Preservation of high quality examples of the natural environment.
- Protection of sensitive or significant natural features or habitat.

ALTERNATIVE PROPOSALS:

Alternatives A and B both include a new Public Preserves District, which is composed of open space areas that are specifically set aside for conservation purposes. Additionally, state parks, which are of regional significance, are included in this district (see Attachment 1).

MILITARY RESERVATION DISTRICT

The Fort Lewis Military Reservation is federally owned and, therefore, exempt from County zoning regulations. Staff is proposing that the base be placed in a Military Reservation District which recognizes its current military use.

ALTERNATIVE PROPOSALS:

Alternatives A and B both include a new Military Reservation District that encompasses the Fort Lewis military base.

INNOVATIVE LAND USE TECHNIQUES

Two innovative land use techniques, planned rural residential development (clustering) and Transfer of Development Rights are proposed to complement the rural residential zoning and to further ensure that the rural goals and policies of the Comprehensive Plan are met. These techniques provide an alternative to conventional large-lot subdivisions and can accommodate a wider variety of rural uses on an individual property. Further information about these two land use techniques will be available at the upcoming public hearings.

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December 1991

**PROPOSED PUBLIC PRESERVES DISTRICT
THURSTON COUNTY**

	Ownership	Size (Acres)	Location (Section-Township-Range)
Johnson Point Wetlands	County	26	9-19-1W
Tolmie State Park	State	106	23-19-1W
Nisqually Wildlife Refuge	Federal/State	2,632	31/32-19-1E & 5/6-18-1E
Woodard Bay Natural Resource Conservation Area	State	627	18/19-19-1W
Woodland Creek Wetlands Preserve	County	75	4-18-1W & 33-19-1W
McAllister Springs	Olympia	223	19-18-1E
McLane Creek Recreation Area	State	42	36-18-3W
Millersylvania State Park	State	841	26/27-17-2W & 34/35-17-2W
Mima Mounds Natural Area Preserve	State	445	3/4-16-3W & 9/10-16-3W
Black River - Mima Prairie Glacial Heritage Preserve	County	1,017	14/15-16-3W & 22/23-16-3W
Black River Natural Habitat Area	County	11	30-16-3W
Elbow Lake Park	State/County	320	32-16-3E
Bald Hill Natural Area Preserve	State	291	4/5-15-3E & 32/33-16-3E
Lake Lawrence Park	County	15	38-16-2E
Nisqually River State Park	State	163	29-16-4E
TOTAL ACREAGE: 6,834			

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ATTACHMENT 1

Appendix 9



communicated effectively?

In addressing the questions of economy versus the structure of the TDR program, the Planning Commission may wish to compare Island County to similar rural communities. Much of the information which will be compiled to facilitate the evaluation of the TDR program will come from individuals who have transferred and/or used TDRs. It will be more difficult to obtain information from those who did not use development rights. Therefore, the Planning Commission may wish to perform a random sampling of County residents and property owners.

b. Planned Residential Development Program

This Chapter allows PRDs on parcels over ten (10) acres, but smaller than twenty (20) acres, in size and on parcels twenty (20) acres or larger in size. The following procedures are intended to provide the information necessary and a mechanism for evaluating whether the program is functioning to achieve a better pattern of development.

1. Records

The Planning Director shall keep a record of the following information:

- (a) application for use approval for a PRD;
- (b) application for preliminary approval for a PRD;
- (c) application for final approval for a PRD;
- (d) size and density of the proposed PRD;
- (e) date of application;
- (f) date of approval, modification or denial;
- (g) reasons for modification or denial, if the application is modified or denied;
- (h) expiration of preliminary approvals prior to application for final approval;
- (i) reapplication by an applicant whose preliminary approval expired or whose application was denied;
- (j) comments from owners of surrounding property regarding compatibility; and

- (k) segregations or plats of 5 and 10 acre tracts.

2. Review

The first review of the records compiled by the Planning Director under this section shall begin within twenty four (24) months of the effective date of this Chapter. Subsequent review shall occur not less than two (2) years nor more than four (4) years following completion of the previous review.

This review shall summarize all activity relative to planned residential developments and shall consider:

- (1) Are changes in the use approval or PRD processes needed to improve the functioning of the system to achieve a better pattern of development?
- (2) If the system is not so functioning, at what juncture has it failed?
- (3) Are PRDs compatible with the predominant pattern of development in the surrounding community?
- (4) Are the site coverage standards appropriate?
- (5) Is openspace functioning as an intergral part of the PRDs?
- (6) Should a recreation area in the RR zone be required?
- (7) Are homeowners' associations functioning effectively?
- (8) Should PRD's on parcels smaller than ten (10) acres in size be allowed?
- (9) Should permitted density be increased?
- (10) Comments from the general public.
- (11) If the system is not functioning to achieve a better pattern of development, what modification should be made?

c. Overlay Zones

This Chapter provides for wetlands and steep/unstable slopes overlay zones. The purposes of the overlay zones are to preserve critical fish and wildlife habitat and encourage enhancement of wetlands, preserve the integrity of water resources and minimize the hazards incident to

development on or adjacent to steep or unstable slopes. The following procedures are intended to provide the information necessary and a mechanism for evaluating whether the overlay zones are functioning to achieve these purposes.

1. Records. The Planning Director shall keep a record of the following information:
 - (a) Properties which contain a wetland or steep or unstable slope;
 - (b) Appeals by a property owner from the designation of all or part of his property as a wetland or steep or unstable slope;
 - (c) Reason for the Hearing Examiner's granting or denying the appeal;
 - (d) Applications for development in or adjacent to wetlands, their buffers or steep or unstable slopes;
 - (e) Mitigation measures contained in approved applications;
 - (f) Violations of ICC 17.02.110;
 - (g) Orders for restoration of a wetland, its buffer or steep or unstable slope pursuant to ICC 17.02.250.

2. Review

The first review of the records complied by the Planning Director under this section shall begin within twenty-four (24) months of the effective date of this Chapter. Subsequent reviews shall occur not less than two (2) years nor more than four (4) years following completion of the previous review.

Review shall summarize all activity relative to development in or adjacent to wetlands, their buffers and steep or unstable slopes and shall consider:

- (a) Are the definitions of wetlands or steep or unstable slopes too broad or too narrow?
- (b) Are the setbacks from wetlands appropriate?
- (c) Are the wetlands being effectively protected and enhanced?
- (d) Are the wetland alteration standards too lenient

or too stringent?

- (e) Is the steep/unstable slopes overlay zone functioning to minimize the hazards incident to development on or adjacent to steep or unstable slopes?
- (f) Should the County prohibit development on slopes exceeding a specified steepness?
- (g) Comments from the general public.
- (h) If the overlay zones are not found to achieve their purposes what modifications should be made?

17.02.170 TRANSFER OF DEVELOPMENT RIGHTS

A transfer of development rights (TDR) program is hereby established.

a. Eligible Lands

Lands eligible to participate in the TDR program shall be classified sending and/or receiving properties.

b. Sending Properties

All lands classified Agriculture or Forest Management eligible to participate in the current use tax assessment program 84.34, RCW and all other lands designated by the wetland overlay as Category A and Category B wetlands, tributary streams and any surrounding buffers are eligible to be established as sending properties.

1. Upon application, each sending property owner shall be granted certificates of development rights, in the form approved by the Board, equal to one (1) dwelling unit per gross acre of the sending property, subject to the following limitations:

- (a) The number of development rights available to an owner of sending property shall be reduced by one (1) development right for:

- (1) every residential structure or lot situated on the property at the time of the adoption of this ordinance; and

1

- (2) when allowed pursuant to this Chapter, every lot or residential dwelling unit reserved for use on the property.

- (b) Development rights are not available for any parcel or portion thereof subject to an easement, restrictive covenant or federal program otherwise restricting or preventing development.

2. When issued, certificates of development rights shall be recorded with the Island County Auditor.

3. Said certificates may be transferred or sold as set forth in this subsection.

c. Receiving Properties

Only land classified Residential, Rural Residential, Agriculture, Forest Management, or within an adopted Zone of Influence or Urban Business Center may be established

as receiving properties.

1. A receiving property may be established by the Board based upon a use approval recommendation of the Planning Commission. The property owner shall apply for use approval for the TDRs and, upon acceptance by the Planning Department, an application shall be processed pursuant to ICC 17.02.180.
2. For each property established as a receiving property, the Board shall also determine the number of development rights which may be utilized in the development of the property.
 - (a) For property under one hundred (100) acres in size and classified rural residential, in no case shall the number of dwellings authorized exceed an average of one dwelling unit per gross acre of site area less any area containing wetlands. Provided that, two (2) development rights shall be required for each dwelling unit authorized beyond base density.
 - (b) For property one hundred (100) acres or larger in size, classified rural residential and served or proposed to be served by public water and sewer systems, in no case shall the number of dwellings authorized exceed an average of six (6) dwelling units per gross acre of site area less any area containing wetlands. Provided that, two development rights shall be required for each dwelling unit authorized beyond base density.
 - (c) For property classified agriculture or forest management, in no case shall the number of dwellings exceed an average of one dwelling unit per (10) gross acres of site area, less any area containing wetlands. Provided that, three (3) development rights shall be required for each dwelling unit authorized beyond base density.
 - (d) For property located within an adopted zone of influence, or urban business center in no case shall the number of dwellings authorized exceed the density established in the applicable zone of influence agreement or urban business center zone. Provided that one (1) development right shall be required for each dwelling unit authorized beyond base density.
 - (e) For property classified residential, in no case shall the number of dwelling units authorized exceed an average of six (6) dwelling units per

gross acre of site area, less any area containing wetlands. Provided that one (1) development right shall be required for each dwelling unit authorized beyond base density; and provided further that, for property reclassified from rural residential, agricultural or forest management to residential, two (2) development rights shall be required for each dwelling unit authorized in excess of the density allowed thorough a cluster PRD in the rural residential zone (1 unit per 2.5 acres) or the agricultural or forest management zone (1 unit per 20 acres).

d. Eligible Purchasers/Sellers

Other than as provided in this Chapter, purchase, transfer and sale of development rights shall to be restricted by the County. Any person may purchase development rights regardless of whether the purchaser is an owner of lands designated as a receiving property. Development rights may be sold or transferred by any owner provided the sale complies with subsection "e" of this section.

e. Development Rights -- Conveyance and Recording

No transfer or sale of development rights shall be deemed finally approved until:

1. A conservation easement, in the form approved by the Board, is approved by the Planning Director, executed by the parties thereto and recorded with the Island County Auditor. The County shall be the beneficiary of the conservation easement. Other named beneficiaries may include but are not limited to tax exempt organizations, land trusts or federal or state agencies.
2. A deed of development rights, in the form approved by the Board, is approved by the Planning Director, executed by the parties thereto and recorded with the Island County Auditor.
3. Any required easement and deed is noted in a TDR transfer journal maintained by the Planning Department.
4. Sending property encompassed in a conservation easement shall equal one (1) acre for each development right proposed for transfer. Provided that any such easement shall include at least ten (10) acres unless a smaller area constitutes the remaining sending property of the property owner.

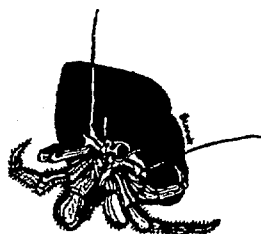
f. Development Rights -- Taxation

Development rights shall be considered real property and not be taxed until sale or transfer.

(Ord. PD 84-22, Dec. 18, 1984, eff. Dec. 31, 1984, Vol. 23, p. 322; amended by Ord. C-41-89, April 10, 1989, eff. April 10, 1989, Vol. 29, p. 357)

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Appendix 10



Because nonpoint pollution problems can be and are very different from one area to the next, solutions to these problems are naturally site specific. It is crucial that local planners contact the local district representative of the U.S. Soil Conservation Service (SCS) for input regarding these and other BMPs.

NOTE: The number in parenthesis is the U.S. Soil Conservation Service (SCS) practice number.

Erosion and Sediment Control

Erosion of soils and the subsequent deposit of silt in receiving waters is a leading cause of loss of habitat for shellfish. This is an important category in BMPs for development and forest practices, as well as agriculture.

Establishing and maintaining perennial vegetative cover to protect soil and water resources on land retired from agricultural production. (SCS 327)

An adapted sequence of crops designed to provide adequate organic residue for maintenance or improvement of soil tilth. (SCS 328)

Any tillage or planting system that maintains at least 30 percent of the soil surface covered by residue after planting to reduce soil erosion by water; or where soil erosion by wind is the primary concern, maintains at least 1,000 pounds of flat, small grain residue or equivalent on the surface during critical erosion periods. (SCS 329)

Farming sloping land in such a way that preparing land, planting, and cultivating are done on the contour. This includes following established grades of terraces or diversions. (SCS 330)

A crop of close-growing grasses, legumes or small grain grown primarily for seasonal protection and soil improvement. It usually is grown for 1 year or less, except where there is permanent cover as in orchards. (SCS 340)

Planting vegetation, such as trees, shrubs, vines, grasses, or legumes, on highly erodible or critically erodible areas (does not include tree planting mainly for wood products). (SCS 342)

Any cropping system in which all of the crop residue and volunteer vegetation are maintained on the soil surface until approximately three weeks before the succeeding crop is planted, thus shortening the bare seedbed period on the fields during critical erosion periods. (SCS 354)

A channel constructed across a slope to divert excess water from one area for use or safe disposal in other areas.(SCS 362)

A strip of perennial vegetation established at the edge of a field to control erosion, primarily from wind.(SCS 386)

A strip of vegetation for removing sediment, organic matter, and other pollutants from runoff and wastewater.(SCS 393)

A structure used to control the grade and head cutting in natural or artificial channels.(SCS 410)

A natural or constructed channel that is shaped or graded to required dimensions and established in suitable vegetation for the stable conveyance of runoff.(SCS 412)

Establishing grasses and legumes or a mixture of them and maintaining the stand for a definite number of years as part of a conservation cropping system.(SCS 411)

A basin constructed to collect and store debris or sediment.(SCS 350)

Growing crops in a systematic arrangement of strips or bands across the general slope (not on the contour) to reduce water erosion. The crops are arranged so that a strip of grass or a close-growing crop is alternated with a clean-tilled crop or fallow. (SCS 585)

An earthen embankment or a combination ridge and channel generally constructed across the slope and minor watercourses to form a sediment trap and water detention basin. (SCS 638)

Confined Animal Facilities

Areas where animals are compounded contain huge amounts of fecal coliform bacteria. Lack of proper control of the runoff from these areas can lead to mass decertifications of commercial shellfish beds in adjacent waters.

An embankment constructed of earth or other materials to protect land against overflow or to regulate water.(SCS 356)

Protecting heavily trafficked areas by establishing vegetative cover, surfacing with suitable materials, or by installing needed structures. (SCS 561)

A facility for controlling, and disposing of runoff water from roofs.
(SCS 558)

An impoundment made by excavation or earthfill for temporary storage of animal or other agricultural wastes. (SCS 425)

A fabricated structure for temporary storage of animal wastes or other organic agricultural wastes.(SCS 313)

An impoundment made by excavation or earthfill for biological treatment of animal or other agricultural wastes.(SCS 359)

Using agricultural wastes or other wastes on the land in an environmentally acceptable manner while maintaining or improving soil and plant resources.(SCS 633)

A facility for the biological stabilization of waste organic material.
(SCS 317)

Nutrients

The basic concept of nutrient management is to prevent pollution by using only the nutrients necessary to produce a crop. To accomplish this, a nutrient management plan can be developed with components similar to the list below:

- ▶ Soils information, a history of past crops and a history of past and present crop rotation.
- ▶ An assessment by field to determine expected yields for the target crop.
- ▶ A summary of the nutrient resources available to the producer for the target crop.
- ▶ Use of proper timing and application methods for nutrients that maximize plant utilization and minimize the loss to the environment.
- ▶ Use of cover crops to promote plant use of nitrogen-laden water.
- ▶ Evaluate field limitations based on environmental hazards and concerns.
- ▶ A narrative describing the plan and its use.

Use of a nutrient plan often results in some reduction in the amount of nutrients being applied to the land, thereby reducing the cost of production as well as protecting water quality.

Pesticides

Pesticides contribute to chemical contamination of water and sediments. Currently, the harm to shellfish has been found to be below levels of concern to public health. But, as the use of chemicals increases in all aspects of our lives, recombination of elements could lead to major problems.

- ▶ More efficient application methods (e.g. spot spraying).
- ▶ Use of resistant crop strains.
- ▶ Use less environmentally persistent pesticides.
- ▶ Use pesticides with reduced mobility in water.
- ▶ Use timing of field operations (planning, cultivating, and harvesting) to minimize applications of pesticides.
- ▶ Use of biological controls such as fostering natural enemies, preservation of predator habitats, and release of sterilized male insects.
- ▶ Use cover crops to promote water use and reduce deep percolation of water that contributes to leaching of pesticides into ground water.
- ▶ Destruction of pest breeding, refuge, and overwintering sites.

Grazing

Pasturing large animals leads to a combination of problems if care is not taken. Manures have the potential of causing fecal coliform contamination in shellfish; increased erosion through lack of streamside fencing and overgrazing can all cause habitat destruction.

A practice in which two or more grazing units are alternately rested and grazed in a planned sequence for a period of years to reduce erosion. (SCS 556)

Postponing grazing or resting grazing land for a prescribed period to promote re-vegetation. (SCS 352)

Grazing at an intensity that will maintain enough cover to protect the soil and maintain or improve the quality of desirable vegetation. (SCS 528)

A trough, tank, or other containment, with needed devices for water control and waste water disposal, installed to provide drinking water for livestock.(SCS 614)

A well constructed to improve or provide water for irrigation, livestock, wildlife, or recreation.(SCS 642)

Exclude livestock access to streambanks and riparian zones or other areas that are not intended for grazing by fencing or use of other permanent structures.(SCS 472)

Establishing or reestablishing long-term stands of adapted species of perennial, biannual, or reseeding forage plants.(SCS 512)

Planting vegetation, such as trees, shrubs, vines, grasses, or legumes, on highly erodible or critically eroding areas.(SCS 342)

Irrigation

The effects of faulty or excessive irrigation can be damaging to shellfish populations through increased runoff, erosion and transport of bacteria and toxins to shellfish growing waters.

Proper irrigation scheduling; determining and controlling the rate, amount, and timing of irrigation water in a planned and efficient manner.(SCS 449)

A planned irrigation system in which all necessary facilities are installed for efficiently applying water directly to the root of plants by means of applicators (i.e. porous tubing, perforated pipe) operated under low pressure. The applicators can be placed on or below the surface of the ground.(SCS 441)

A planned irrigation system in which all necessary facilities are installed for efficiently applying water by means of perforated pipes or nozzles operated under pressure.(SCS 442)

A planned irrigation system in which all necessary water control structures have been installed for efficient distribution of irrigation water by surface means, such as furrows, borders, contour levees, or contour ditches, or by subsurface means.(SCS 443)

A permanent irrigation ditch constructed to convey water from the source of supply to a field or fields in a farm distribution system.(SCS 388)

Reshaping the surface of land to be irrigated to planned grades.
(SCS 464)

A fixed lining of impervious material installed in an existing or newly constructed irrigation field ditch or irrigation canal or lateral.(SCS 428)

A structure in an irrigation, drainage, or other water management system that conveys water, controls the direction or rate of flow, or maintains a desired water surface elevation.(SCS 587)

Utilization of runoff irrigation water for additional irrigation or to reduce the amount of water diverted.(SCS 447)

A strip or area of vegetation for removing sediment, organic matter, and other pollutants from runoff and waste water.(SCS 393)